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ABSTRACT

Utilizing a systematic sampling technique, the professional activities of small groups of pediatricians, family practitioners, surgeons, obstetricians, and internists were observed for 4 or 5 days by a medical student who checked a prearranged activity sheet every 30 seconds to: (1) identify those tasks and activities an assistant could be trained to perform, and (2) determine the activities requiring the greatest percentage of the physician's professional time, both in the office and hospital. After the data were tabulated and the percentage time distribution had been completed, a committee for each specialty reviewed the results and agreed on those activities for which an assistant should be trained. In all five specialties the most time-consuming activity was related to the gathering and organizing of data and information incident to history taking and physical examination. On the basis of functional job analyses, course outlines, training objectives, and goals for training physician's assistants were developed. These development activities are described in this report. Related curriculum materials are available as VT 014 672. (SB)

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THE SYSTEMS APPROACH TO FUNCTIONAL JOB ANALYSIS

Task Analysis of the Physician's Assistant

VOLUME I

Task Analysis Methodology and Techniques

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REPORT #5

INTRODUCTION

This report, relative to N.I.H. 70-4090 ("Conduct a project to define and develop an educational program for the 'Pediatric Assistant to the Physician'"), is devoted mainly to the first three items of Article I. Scope of work:

1. Using techniques of task analysis, examine both in the hospital and in practice the duties and tasks of pediatricians and the other major specialties (medicine, surgery and general or family practice) to develop a basic general working definition of the assistant to the physician.
2. Based on 1 above and other factors, develop job descriptions of "assistants to the physician" in the fields of pediatrics, medicine, surgery, and general or family practice.
3. Develop a core educational program suitable for the training of those jobs described in 2 above and in particular for pediatrics. This will include an analysis of the roles that the medical school, community college and related hospitals can provide.

The work related to this Contract was initiated (July 1968) by identifying those tasks or activities traditionally carried out by a physician which an assistant could be trained to perform. The method used is referred to as "The Systematic Sampling Technique for Work Analysis" and is utilized by industrial engineers. Kanon and Somis pioneered the application of this technique to clinic work.(1)

The systematic sampling technique utilized in this project involved the observation, for four to five days, of the professional activities of a physician by a medical student who checked a pre-arranged activity sheet every thirty seconds. This method perhaps is better described as a time and motion study of physician activities.

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(1) Kanon D., and Somis, A., "I.E.'s Apply Systematic Sampling to Clinic Work," Industrial Engineering, 1:4 (April, 1969).

The professional activities of small groups of pediatricians,(2) family practitioners,(3) surgeons,(4) obstetricians and internists were observed. The purpose and objective of these "time and motion" studies was not to determine the average activity time distribution of one of the specialties but rather to:

1. Identify those tasks and activities an assistant could be trained to perform.
2. Determine the activities which required the greatest percentage of the physician's professional time, both in the office and hospital.

After the data were tabulated and after the determination of the percentage time distribution had been completed, a committee for each specialty reviewed the results and agreed on those activities for which an assistant should be trained. In all five of the specialties the most time-consuming activity was related to the gathering and organizing of data and information incident to history taking and to the physical examination.

The functions and activities common to nearly all of the specialties studied and agreed to by the physician committees can be grouped as follows:

1. Detailed patient history, including family-social, past medical, present illness, and interval events.
    a. coordination and assessment of historical data and information noting and describing abnormal findings.
    b. progress notes on hospital, home, and office patients.
    c. hospital discharge summaries for physician's review and signature.

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(2) Contract N.I.H. 70-4090 Report #1.

(3) Contract N.I.H. 70-4090 Report #3.

(4) Contract N.I.H. 70-4090 Report #4.

2. Complete systematic physical examination

   a. ability to properly use routine examining equipment and procedures

      1) stethoscope
      2) sphygmomanometer
      3) percussion hammer
      4) tuning fork
      5) otoscope and ophthalmoscope
      6) hearing and vision testing equipment
      7) proctoscope
      8) skin tests

   b. coordination and assessment of the physical examination findings noting and describing abnormal findings.
   c. routine health examinations for employment, school, insurance, etc., and completion of reports.

3. Perform and/or schedule routine test procedures

   a. routine blood examination, counts, differential counts, hemoglobin and ability to recognize and describe abnormal cell histology.
   b. routine urines including calcium determinations.
   c. tests for occult blood in feces.
   d. skin tests.

4. Perform and/or schedule special diagnostic tests and procedures as directed by the physician.

   a. perform E.K.G. and be able to determine deviations from normal tracings (care and adjustment of instrument).
   b. take and develop x-ray films of chest and extremities.
   c. naso-gastric intubation and gastric analysis
   d. lumbar puncture and cell counts
   e. schedule special procedures, i.e., organ scans, G.I. series, etc.

5. Assist the physician with therapy

   a. immunizations
   b. first aid and triage
   c. suturing minor lacerations
   d. splint and cast application and removal (family practice and surgery)
   e. intravenous and subcutaneous medication
   f. inhalation therapy (equipment)
   g. physical therapy (equipment)
   h. catheterization
   i. dressings
   j. assist in surgery (surgery, obstetrics and family practice)
   k. assist in deliveries (family practice and obstetrics)
   l. interpret doctor's instructions and orders to patient and others. Provide health education materials and/or counseling as indicated.

6. Miscellaneous
    a. interpretation and checking of automated patient data, i.e., patient self-history, scheduling, multi-phasic screening, etc.
    b. handle telephone for information and minor conditions
    c. do assigned administrative duties, i.e., completion of insurance claims, Medicaid, Medicare forms, etc.
    d. assist with community health service commitments (school health, community clinics, etc.)
    e. home visits and follow-up

The functional job analysis, definition, job description and curriculum for the physician's assistant training program presented in this report have been directed toward the common tasks and activities listed above. A methodology for task analysis was developed on the assumption that a physician's assistant able to perform these tasks or activities would fulfill the purpose and objectives of the program.

JOB ANALYSIS METHODOLOGY

Several approaches to job analysis in the health field were reviewed.(5,6,7,8) Most of these studies and reports were received after a decision was made to adopt the "Systems Approach to Functional Job Analysis" developed by Sidney A. Fine.(9,10) The previous references were helpful in the final recording of the methodology of this project.

The system, stated simply, is the training program for the physician's assistant. The input into the system is the curriculum program, and the output is the trained physician's assistant. The system is divided into three subsystems:

1. A basic foundation course program in clinical and bioscience principles and in interpersonal relations.
2. A period of intensive training in the special procedures and skills of a clinical specialty of the student's choice (including family practice).
3. Periods of supervised practice in the hospital, in clinics and in the office of a practitioner.

To accomplish the purpose and goals of the system, the subsystem's objectives and goals are directed to the training situation and to experience intended to assist the student to acquire necessary knowledge and skills in

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(5) Gilpatrick, Eleanor. "Health Services Mobility Study." Research Foundation, City University of New York.

(6) Moncrief, James L. "The North Carolina Department of Mental Health Career Ladder - A Concept." Multilith copy.

(7) Smalley, Harold E. "Toward a System Design for Health Education Planning." Georgia Institute of Technology. Multilith copy.

(8) Fraden, Jules, and Schneider, F. Richards. "A Program for the Orthopaedic Assistant." City College of San Francisco. March, 1970.

(9) Churchman, E. West. "Systems." Delacorte Press, New York.

(10) Wiley, Wretha W., and Fine, Sidney A. "A System Approach to New Careers." The W. E. Upjohn Institute for Employment Research, Kalamazoo, Michigan. November, 1969.

the activities and tasks determined in part from the the physician's time and motion studies (work analysis) as listed on pages 2, 3 and 4.

Subsystem 1. includes the training and experience to enable the student to do a general history and physical examination and to develop acceptable rapport with patients (interpersonal relations).

Subsystem 2. provides training and experience in specialized clinical areas including special procedures and the use and maintenance of therapy equipment.

Subsystem 3. provides the necessary supervised experience and practice to enable the student to perfect his skills and procedures in order that he be equipped to function as an assistant to a physician.

The subsystem training objectives are identified under six headings for the purpose of accomplishing a functional job analysis.

Upon completion of the functional job analyses, the course outlines, training objectives and goals were developed. The analyses also provided the basis for the definition and job description of the physician's assistant. The methodology is diagrammed in Figure 1. A detailed report of the study is presented in the balance of this report.

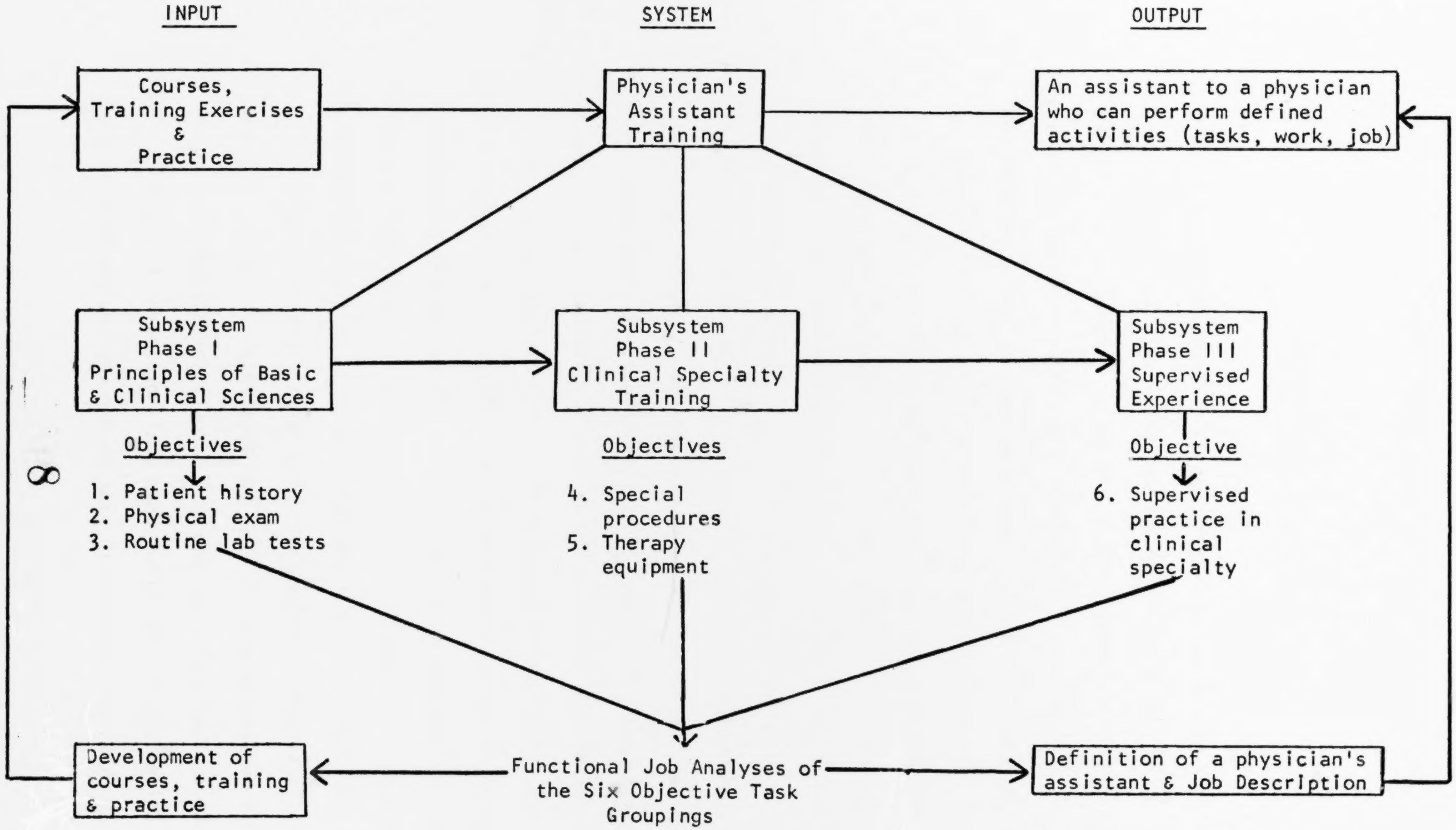

INPUT
SYSTEM
OUTPUT
Courses, Training Exercises & Practice
Physician's Assistant Training
An assistant to a physician who can perform defined activities (tasks, work, job)
Subsystem Phase I Principles of Basic & Clinical Sciences
Subsystem Phase II Clinical Specialty Training
Subsystem Phase III Supervised Experience
Objectives
1. Patient history
2. Physical exam
3. Routine lab tests
Objectives
4. Special procedures
5. Therapy equipment
Objective
6. Supervised practice in clinical specialty
Development of courses, training & practice
Functional Job Analyses of the Six Objective Task Groupings
Definition of a physician's assistant & Job Description

FIGURE I.

ESSENTIAL ELEMENTS OF A SYSTEM

Explanatory Note

The requirement of the system is that a controlling Master Purpose be defined which yields direction and criteria for measuring progress toward an ultimate end result. Once the Master Purpose is established, then Goals can be derived, that is, the major steps required to reach or accomplish the Master Purpose. These statements of goals are more specific. They enable the system designers to set priorities and give direction to such questions as: What must be done first; how should resources be distributed? Like the Purpose statement, they must yield direction and criteria on which to measure progress and accomplishment.

No system is ideal, or exists in a vacuum. It is surrounded by factors of limitation, favorable or unfavorable conditions, resources and constraints. To bring the system down to earth, so to speak, and into the operational field, system objectives must be formulated. These are statements of short range activity that face the limits and constraints on the system. They direct Monday morning activity and set a target date (a matter of weeks, months for accomplishment). They are work directives, that is, manpower resources that are divided up and allocated to accomplish specific objectives. If stated properly, they give the most immediate direction, and yield the most immediate criteria for those workers in the system to judge their progress or lack of progress.

The link between Purpose, Goals, and Objectives is tight. Purpose controls the system; goals set priority targets for accomplishing purpose; objectives are derived under each goal considered in the hard light of system constraints. Accomplish your objectives and you fulfill some goals; fulfill some goals and you come closer to attaining the Master Purpose, the raison d'etre of the system or organization.

For more on the conceptual framework of a system, see Churchman, C. W., The Systems Approach and Fine, S. A., A Systems Approach to New Careers. It will be shown later how task end results, effects brought about by workers' activities, feed into and accomplish system objectives.

THE SYSTEM

TRAINING PROGRAM FOR PHYSICIAN'S ASSISTANTS

Master Purpose

Employment of trained physician's assistants by physicians throughout the state (any state of the Union) in order simultaneously:

1) to meet the increasing needs of citizens for quality medical services;
2) to relieve physicians from overburdening work so they can function and apply their skills more effectively;
3) to provide career opportunities in the field of medicine for incumbents of the physician's assistant position.

Goals

1) To determine, within X* time period, the need for physician's assistants throughout the state, employment opportunities and acceptance of the physician's assistant's role by physicians, patients, and other allied health workers. (See Appendix I.)
2) To identify, within X time period, physician's activities (tasks), both in the physician's office and in the hospital setting, which an assistant can be trained to perform.
3) To develop, within X time period after the completion of Goal 1, a definition and job description of the physician's assistant.
4) To produce a training program, within X time period, which will enable the physician's assistant to perform tasks and meet standards (based on 2 and 3 above).
5) To determine, within X time period, selection criteria for acceptable trainees.
6) To determine, within X time period, the roles of the medical school, community colleges, community health agencies, hospitals and practicing physicians in the training program.
7) To determine, within X time period, necessary changes in existing regulations and laws to clarify the legal status of the physician's assistant (including medical malpractice liabilities).

*NOTE: Time periods are not specified in this illustration because constraints and time limits will vary from place to place and from institution to institution. Anyone who uses this model will have to set time constraints based on his knowledge of time limitations as they affect his system.

8) To evaluate and report on, within X time period, career change and mobility options for the physician's assistant during and following the training program.

9) To study and report on, within X time period, the options of equivalency evaluation of past training and experience for multi-level entry into the training program.

10) To study and develop a method (protocol), within X time period, for evaluating the physician's assistant training program, including the social and economic impact of the addition of a physician's assistant to the medical care delivery process. (See Appendix II)

Reality Conditions/Limitations

1) Demand for and acceptance of the physician's assistant.

2) Legal and supervisory responsibilities of the physician.

3) Extent of physician's assistant activities and responsibilities.

4) Compensation and employment arrangements.

5) Availability of money to support the training program.

6) Difficulty experienced by some medical teaching personnel in understanding the different learning styles of trainees.

7) Scheduling problems (supervising physician's assistant clinical training).

Objectives

1) To obtain, by X time period, statements and responses to questionnaires from at least 50% of the physicians across the state concerning their interest in employing a physician's assistant (related to Goal 1). (See Appendix I)

2) To report, by X time period, on the literature and studies regarding patient acceptance of the physician's assistant (related to Goal 1).

3) To complete work analysis studies (time and motion studies) and identify the work activities which a physician's assistant can be expected to perform.

4) To complete a Functional Job Analysis of core tasks to be performed by the physician's assistant by X time period (related to Goal 2).

5) To complete a task analysis of the selected specialties to be performed by the physician's assistant by X time period (related to Goal 2).

6) To draft tentative working definitions and job descriptions based on the task analysis for the special physician's assistants by X time period (related to Goal 3).

7) To develop and outline the courses in basic and clinical sciences necessary for a foundation for the clinical training of a physician's assistant.

8) To develop and outline the courses and training experiences necessary for the basic clinical training of a physician's assistant in a particular specialty.

9) To develop and outline the training program for the supervised clinical practice of the physician's assistant.

10) To set criteria for trainee selection based on feedback from physicians, medical school instructors, etc., within the planning time period for curriculum (Phase I) (related to Goal 5).

11) To obtain feedback from questionnaires and/or meetings with state and private medical schools and community colleges and hospitals on how such institutions can contribute to the physician's assistant training program (related to Goal 6).

12) To establish, by X time period, the range of legal problems encountered if a physician employs a physician's assistant (related to Goal 7).

13) To obtain information and proposed resolutions of these (above) problems in cooperation with Duke University personnel, malpractice underwriters and the insurance rating board, by X time period (related to Goal 7).

14) To obtain a definition of legal requirements of the physician's assistant position in cooperation with Duke University personnel, State Medical Society representatives and the State Board of Medical Examiners (related to Goal 7).

15) To develop a legislative amendment to the present North Carolina Medical Practice Act which would recognize delegation of duties by a physician to a physician's assistant and define the physician's assistant qualifications, by X time period (related to Goal 7).

16) To establish, with X time period, options and work opportunities in other fields for trainees who do not complete the prescribed courses (related to Goal 8).

17) To establish procedures, within X time period, for continued education and training and career expansion for trainees completing the training program (related to Goal 8).

18) To obtain information (precedents), by X time period, from other similar training programs, on multilevel entry into the training program (related to Goal 9).

19) To establish, by X time period, a procedure for multilevel entry into the training program (related to Goal 9).

20) To develop student/faculty questionnaires to be used as evaluation feedback on the training program by X time period (related to Goal 10).

21) To develop, within X time period, a protocol for tracking and reporting the social and economic impact of the training program on: the physician's assistant, physicians (employers or those associated with the program) and other selected health field institutions and personnel (related to Goal 10). (See Appendix II.)

THE SUBSYSTEMS

Explanatory Note

As the name implies, the subsystem is a subordinate part of and a contributor to the parent system. Subsystems are designed according to the tendency to divide and organize labor. A university has different schools. The schools, in turn, have different departments. These schools and departments are organized around common objectives.

In the present format, the training subsystems are basically organized around objectives 7 through 10 of the "Parent System." Of course, there are close and overlapping connections with the other objectives. If the total system is to function harmoniously, this interrelationship of parts is required.

For our purposes, the subsystems are treated very much like the system. The main difference, it will be noted, is the sharper focus and greater specificity of goals and objectives.

SUBSYSTEM I

Basic Training Curriculum - Phase I

Purpose: That each trainee gain a fundamental working knowledge (as determined by staff evaluation) of the principles and application of the basic and clinical medical sciences.

Goals

1) To provide the student throughout the training period with an integrated and correlated curriculum and learning methods, based on the human body systems, which will enable him to understand and differentiate normal and abnormal system functions.

2) To enable the student to determine body system functions through history taking, physical examinations, laboratory procedures and special diagnostic instrumentation.

3) To enable the student to cope with the variety of patient situations confronting the physician and to maintain professional relationships with all types of patients.

Reality Conditions/Limitations

1) Differential backgrounds, educational experiences, styles of learning of trainees.

2) Not all students learn at the same pace - time limits for courses.

3) Instructor-trainee relationship. (Not all instructors can relate to or teach physician's assistants.)

4) Curriculum teaching methods are relatively new to most trainees.

Objectives

1) That trainees attain a working knowledge of normal anatomy and physiology (as determined by staff evaluation) within six months.

2) That trainees attain a working knowledge of abnormal anatomy and physiology (as determined by staff evaluation) within six months.

3) That trainees understand the principles of the actions and abnormal reactions associated with specified drug groups within six months.

4) That trainees become familiar with, understand, and be able to use basic medical terminology within six months.

5) That trainees can exercise interviewing and basic counseling techniques, including practicum in history taking, within six months.

Objectives (cont'd)

6) That trainees understand the principles of and indications for clinical laboratory procedures within six months.

7) That trainees attain the ability to perform routine blood and urine examinations within six months.

8) That trainees have an understanding of the principles and indications for use of special diagnostic instrumentation within six months.

9) That trainees have an understanding of medical ethics as applied to the physician's assistant within three months.

10) That trainees attain the ability to provide necessary first aid in emergencies within three months.

11) That trainees attain the ability to perform a complete physical examination during the first six months.

12) That trainees attain the ability properly to use the medical record within six months.

Procedures, Methods, Techniques

1. Classroom and laboratory exercises.
2. Observation and practice of special procedures and use of diagnostic equipment.
3. Observation/practicum in history taking and physical examinations.
4. Testing/performance, evaluation, oral/written tests.

SUBSYSTEM II

Specialty Clinical Training (Phase II)

Purpose: To provide the physician's assistant with the knowledge and skills required to perform the functions of their specialty choice.

Goals

1) To enable the student, over the course of specialty training, to acquire the substantive and practical understanding of his selected specialty - as demonstrated by performance evaluation in class and/or assigned cases.

2) To enable the student, over the course of specialty training, to recognize, understand and report any deviations from the normal body systems related to his clinical specialty areas.

3) To enable the student to carry out the procedures and functions of his specialty in accordance with instructions of a supervising physician.

Reality Conditions/Limitations

1) Students must successfully complete Phase I of training or demonstrate equivalent competency prior to entering specialty training.

2) It is necessary to make available a staff of instructors who can communicate and relate well with physician's assistant students of varying educational and experiential backgrounds.

3) Difficulty in condensing technical material into instructional time periods; differential learning rates of physician's assistant students.

4) The family practitioner's assistant must rotate through all specialty departments.

Objectives

TO ENABLE THE PHYSICIAN'S ASSISTANT TRAINING IN THE SPECIALTY :

1) to obtain within the six months of Phase II up to eight hours of classroom training per week in his specialty area (related to Goal 1);

2) to obtain, within six months, the experience and proficiency to complete detailed case histories as required by the specialty (related to Goal 1);

3) to complete physical examinations of patients related to the specialty and assess, summarize findings for the physician's review, within six months training period (related to Goal 1);

Objectives (continued)

4) to understand and to be able, within six months, to apply the criteria for distinguishing between normal and abnormal conditions of a patient pertaining to specialty systems (related to Goal 2);

5) to understand, within six months, the actions and adverse reactions associated with drugs commonly used by the specialty (related to Goal 2);

6) to organize and summarize for the physician, within the training period (six months), the negative and positive findings of a case, including progress notes (related to Goal 2);

7) to observe and, within six months, to assist physician with therapy, utilizing the procedures and equipment of the specialty (related to Goals 2 and 3);

8) to observe and perform, within six months, the most common laboratory procedures related to the specialty (related to Goal 3);

9) to be able, within six months, to schedule tests and diagnostic procedures, using flow chart technique (related to Goals 2 and 3);

10) to prepare for the physician, within six months, summary discharge notes of hospitalized cases (related to Goals 2 and 3).

Procedures, Methods, and Techniques

1) Discussion and demonstration of the important illnesses and abnormal conditions cared for by the specialty.

2) Case assignments in the hospital and outpatient department for complete workup.

3) Case conferences.

4) Group discussion and case presentation.

5) Therapy conferences relating to medication and special procedures.

SUBSYSTEM III

Supervised Clinical Experience for the Physician's Assistant

Purpose: That each physician's assistant gain a practical understanding of his training (phases I and II) through work experience and increase his understanding of the working relationship between himself and his supervising physician during the X * month practicum.

Goals

1) To provide work assignments for each physician's assistant under the direction of a supervising physician in hospitals, clinics and in a physician's office.

2) To evaluate the practicum experience of each physician's assistant during X time period.

3) To provide the opportunity for an increased awareness and understanding on the part of both the physician's assistant and the physician regarding his working relationships and effective utilization of the abilities and talents of both.

Reality Conditions/Limitations

1) Some physicians do not understand the emerging role of the physician's assistant.

2) Not all physicians have the ability or interest to supervise a physician's assistant.

3) The practicum will be different in the hospital, clinic and private practice.

4) Time period of the practicum is relative to the differential abilities of the physician's assistant - What is too long? - too short?

Objectives

1) To obtain by X time period prior to Phase III formal commitments from the hospitals, clinics and physicians in private practice to accept X number of physician's assistants for the supervised practicum.

    a) To provide 1 1/2 - 2 month practicum for X number of physician's assistants in the Forsyth County Comprehensive Health Clinic

* NOTE: Specific time periods are not included in the statements because the time limitations of implementing objectives will vary from place to place, institution to institution. If the model is useful, the users must set their own time periods.

Objectives (cont'd)

1) b) To provide 1 1/2 - 2 month practicum for X number of physician's assistants in X number of local health department clinics.

   c) To provide a 3 - 4 month preceptorship program in a practicing physician's office for each physician's assistant.

(These objectives partially implement Goal 1.)

2) To obtain formal commitments from the number of physicians required to supervise and direct each physician's assistant in the above practicum period (related to Goal 1).

3) To provide special orientation for each physician's assistant, his supervising physician and hospital/clinic personnel as required so that all understand and accept the procedures for each practicum (related to Goal 1).

4) To define, prior to the practicum periods, the major performance standards on which the physician's assistant will be evaluated:

   a) To communicate these standards to supervising physicians and physician's assistants to insure mutual understanding before the practicum periods begin (related to Goal 2).

5) To review and report on the work performance of the physician's assistant every X weeks during all practicum periods (related to Goal 2).

6) a) To report periodically (every week or X weeks) the specific areas (tasks) for which a physician's assistant will require additional training.

   b) To assign the physician's assistant additional, more complex and responsible tasks within X period of time after evaluation reports recommend such assignment (related to Goal 2).

7) To obtain, record, and report on feedback (questionnaires, conferences, etc.) from supervising physicians on a biweekly basis on problems of supervision, role definition, working relationships, etc. (related to Goal 3).

8) To obtain, record and report on feedback from the physician's assistants - individually and in groups, on problems, work relationships to physicians, etc., on a biweekly basis during the entire practicum period (related to Goal 3).

Objectives (cont'd)

9) To provide X hours of inservice training to supervising physicians per month on:

   a) how to utilize a physician's assistant

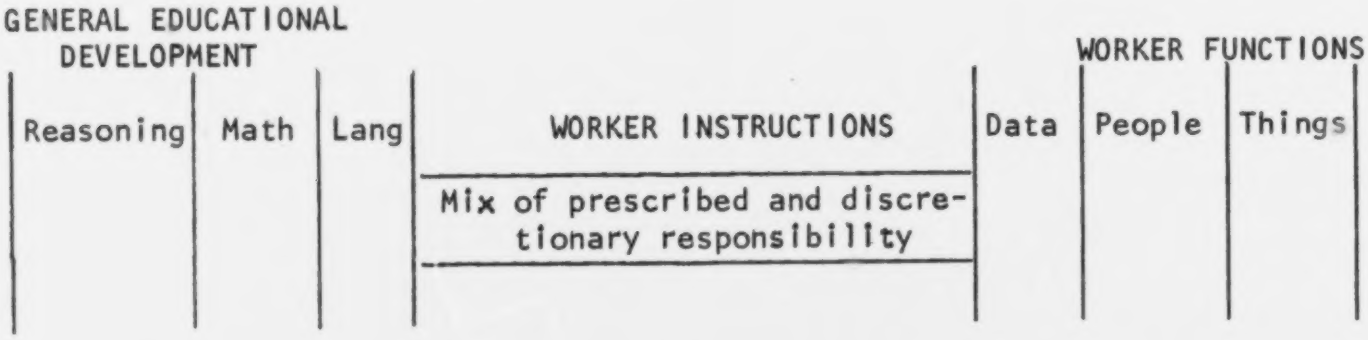
   b) techniques of supervision and performance evaluation, etc. (related to Goal 3).

OVERVIEW OF SCALES FOR FUNCTIONAL JOB ANALYSIS

This overview of the seven scales utilized for the functional job analysis in this project follows that presented in the Functional Job Analysis Manual[11] utilized in the Upjohn Institute's Seminar: A Systems Approach to Task Analysis and Job Design.

The seven scales focus on 1) General Educational Development: What reasoning, mathematics and language abilities workers need to know to carry out instructions (3 scales); 2) Worker Instructions: What workers are instructed to do to get a job done (1 scale); 3) Worker Functions: What workers do - the levels on which they function in relation to data, patients, and equipment (instruments, etc.) (3 scales). (See Figure 2 for a diagrammatic picture of the scales.)

Figure 2


GENERAL EDUCATIONAL DEVELOPMENT
Reasoning
Math
Lang
WORKER INSTRUCTIONS
Mix of prescribed and discretionary responsibility
Data
WORKER FUNCTIONS
People
Things

The levels in each scale are arranged ordinally; that is, any given level includes the requirements of the lower levels and excludes the requirements of the higher levels. Therefore, selection of a scale level appropriate to a given job is:

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[11] Fine, Sidney A. "Functional Job Analysis Manual." The W. E. Upjohn Institute for Employment Research. Kalamazoo, Michigan. 1969.

1. to say everything that needs to be said about that job for that scale;
2. to place that job in an ordered relationship to all other jobs for that scale.

Thus, the scales tell you two of the things you most need to know:

   a. what a worker is really doing and
   b. how his job compares to what others are doing, e.g., the physician and the office and hospital workers.

3. There is, of course, more to jobs than what these scales measure - for example, the demands made by the physical and social environment of the job situation. Ability to adapt to these conditions can often be as crucial as knowledge of the job content in achieving success on the job. However, the scales focus on those aspects of jobs most relevant for manpower planning.
4. There is some overlap among the scales, particularly at the higher levels. This is due to the fact that the parameters which the scales represent are different ways to cut through the same job-worker situations.
5. Two assumptions are inherent in the scales:
   a. A job involves the worker as a whole person - physically, mentally, and interpersonally;
   b. all jobs involve the worker with DATA, with PEOPLE, and with THINGS to some degree. For example, although an automotive

b. (cont'd)

assemblyline worker's primary involvement is with THINGS, he also has a relationship with his co-workers and supervisors. A worker's aptitudes and preferences in regard to the three basics can be indicative of his future performance and job satisfaction; for example, someone who does not enjoy dealing with people would be more likely to work out as a night watchman than would a naturally gregarious person.

In applying the Functional Job Analysis (F.J.A.) Scales to the role of the physician's assistant, we have attempted to do two things: first, to remain within the framework of the Upjohn task analysis method as developed by Dr. Fine; second, to relate that method and the F.J.A. Scales to our situation and the specific role of the physician's assistant.

The presentation of the scales that follow, therefore, will enable the reader to see how this was done. On one page the Upjohn F.J.A. Scales will be presented. On the adjacent page will be shown our adaptation and illustration of the Scales as they relate to the position of physician's assistants.

THE FUNCTIONAL JOB ANALYSIS SCALES

SCALE OF WORKER INSTRUCTIONS

Explanatory Note

When any worker (in this case the physician's assistant) performs a task he both follows prescription and exercises discretion. The end results of his tasks are most often prescribed. For example, he is to perform a physical examination, but not to make a final diagnosis or a final treatment plan. Means to accomplish the end results are also often prescribed. To obtain blood pressure readings, he uses a spyghmomanometer. To complete a physical examination report for the physician, he follows the format prescribed by the physician.

In performing any task, however, he exercises discretion. He makes his own decisions as to the way he will do this or that, or how he will apply his experience in carrying out a certain task.

As workers grow in a job, they tend to exercise more discretion and make more important decisions.

The scales that follow present the ratio of prescription/discretion in ascending level of complexity and responsibility. Level 1 would apply to tasks with the most prescription and the least discretion. Level 8 would be the opposite.

The prescription/discretion classification is vital in establishing any new work position.

WORKER INSTRUCTIONS

THE W.E. UPJOHN INSTITUTE FOR EMPLOYMENT RESEARCH

SCALE OF WORKER INSTRUCTIONS

LEVEL	DEFINITION
1	Inputs, outputs, tools, equipment, and procedures are all specified. Almost everything the worker needs to know is contained in his assignment. He is supposed to turn out a specified amount of work or a standard number of units per hour or day.
2	Inputs, outputs, tools, and equipment are all specified, but the worker has some leeway in the procedures and methods he can use to get the job done. Almost all the information he needs is in his assignment. His production is measured on a daily or weekly basis.
3	Inputs and outputs are specified, but the worker has considerable freedom as to procedures and timing, including the use of tools and equipment. He has to refer to several standard sources for information (handbooks, catalogs, wall charts). Time to complete a particular product or service is specified, but this varies up to several hours.
4	Output (product or service) is specified in the assignment, which may be in the form of a memorandum or of a schematic (sketch or blueprint). The worker must work out his own ways of getting the job done, including selection of tools and equipment, sequence of operations (tasks), and obtaining important information (handbooks, etc.). He may either carry out work himself or set up standards and procedures for others.
5	Same as (4) above, but in addition the worker is expected to know and employ theory so that he understands the whys and wherefores of the various options that are available for dealing with a problem and can independently select from among them. He may have to do some reading in the professional and/or trade literature in order to gain this understanding.
6	Various possible outputs are described that can meet stated technical or administrative needs. The worker must investigate the various possible outputs and evaluate them in regard to performance characteristics and input demands. This usually requires his creative use of theory well beyond referring to standard sources. There is no specification of inputs, methods, sequences, sources, or the like.
7	There is some question as to what the need or problem really is or what directions should be pursued in solving it. In order to define it, control and explore the behavior of the variables, and formulate possible outputs and their performance characteristics, the worker must consult largely unspecified sources of information, and devise investigations, surveys, or data analysis studies.
8	Information and/or direction comes to the worker in terms of needs (tactical, organizational, strategic, financial). He must call for staff reports and recommendations concerning methods of dealing with them. He coordinates both organizational and technical data in order to make decisions and determinations regarding courses of action (outputs) for major sections (divisions, groups) of his organization.

How the Scale of Worker Instruction Applies to the Physician's Assistant's Responsibilities
(Prescribed and Discretionary Functions)

LEVEL	DEFINITION
1.	The assistant follows instructions which can be carried out exactly as specified in written or verbal form (i.e., recording patient's complaints via a check list, weighing and measuring, blood pressure, taking and recording temperature following a prescribed method, taking or obtaining a routine laboratory specimen, attaching the E.K.G. leads and starting and stopping the machine, etc.).
2.	The assistant's instructions are limited and specified but he has some leeway in the procedures or methods he can use to get the job done. (i.e., obtain patient's chief complaints, re: his illness and/or completion of a history and symptom check sheet. The assistant has some leeway in sequencing his questioning and recording.)
3.	The assistant's functions are specified but he has considerable leeway as to procedures and timing. (i.e., taking and recording a detailed history, including family-social, past medical, present illness and interval events. The assistant is responsible for immediate referral to supervising physician if specified findings indicate a seriously ill person.)
4.	The assistant's functions are specified in his assignments, but he must work out his own ways of getting the job done, including selection of equipment he uses and sequencing of procedures. He may carry out some of the tasks himself or refer the tasks to others (i.e., conducts a detailed physical examination, utilizing various instruments to complete the examination, performs or schedules specified routine laboratory procedures - bloods, urines, etc. - and uses or schedules specified equipment such as an electrocardiography).
5.	Same as (4) above, but in addition, the worker is expected to know and employ some theory so that he understands the whys and wherefores of the various options that are available for dealing with a patient who needs more than routine procedures (i.e., ordering (reduces discretion), special laboratory procedures and/or special diagnostic procedures - G.I. series, organ scans, special blood chemistries, etc.).
6.	Various possible procedures are available to meet a patient's immediate needs. The assistant, in the absence of the physician, must consider the various possible procedures and evaluate them in regard to the immediate procedural demand. This usually requires his creative use of theory well beyond referring to standard sources (i.e., handling an immediate critical emergency, first aid, and triage). The situation is such that a physician is simply not available and that any delay will jeopardize the patient's condition and/or life.
NOTE:	It is unlikely that the Prescription/Discretion ratio for tasks performed by the physician's assistant will go beyond Level 6. At the present, no such tasks have been defined beyond that level.

WORKER FUNCTIONS

(Data, People, Things)

HOW THEY APPLY TO FUNCTIONS PERFORMED BY THE PHYSICIAN'S ASSISTANT

SCALES OF WORKER FUNCTIONS

Data Functions Scale

Data should be understood to mean information, ideas, facts, and statistics. Where data is not involved in a major way, note that it is at least present in the details of the job instruction.

LEVEL	DEFINITION
1	COMPARING Selects, sorts, or arranges data, people, or things, judging whether their readily observable, functional, structural, or compositional characteristics are similar to or different from prescribed standards.
2	COPYING Transcribes, enters, and/or posts data. Follows exactly a step-by-step schematic or plan to assemble or make things.
3A	COMPUTING Performs arithmetic operations and makes reports and/or carries out a prescribed action in relation to them.
3B	COMPILING Gathers, collates, or classifies information about data, people, or things.
4	ANALYZING Examines and evaluates data (about things, data, or people) with reference to the criteria, standards, and/or requirements of a particular discipline, art, technique, or craft to determine interaction effects (consequences) and to consider alternatives.
5	COORDINATING Decides time, place, and sequence of operations of a process, system, or organization, and/or the need for revision of goals, policies (boundary conditions), or procedures, on the basis of analysis of data and of performance review of pertinent objectives and requirements. Includes executing decisions and/or reporting on events.
6	SYNTHESIZING Takes off in new directions on the basis of personal intuitions, feelings, and ideas with or without regard for tradition, experience, and existing parameters, to conceive new approaches to or statements of problems and the development of system, operational, or aesthetic "solutions" or "resolutions" of them.

How the Data Function Scale Applies to Functions Performed by the Physician's Assistant

LEVEL	DEFINITION
1.	Comparing Selects, sorts or arranges patient information, patient visits or procedures, judging whether these arrangements conform or disconform with routine scheduling prescribed by the physician.
2.	Copying Transcribes, enters, and/or posts patient data and information. Follows prescribed plan in a) recording information on charts, b) laying out standard, often used equipment.
3.	Compiling Gathers, collates or classifies data and information about history, physical examination results of patients and their families; e.g., putting together data for review by supervising physician, special lab test results.
4.	Analyzing Examines and evaluates data about PEOPLE (patients), DATA (reports on, records of patients), and THINGS (e.g., medical instruments, equipment) with reference to the criteria, standards and/or requirements of a particular discipline (see course titles for physician's assistants), art or technique to determine interaction effects (consequences) and to consider alternatives. The physician's assistant is 'Analyzing' when he performs tasks requiring constant reference to his background training in Anatomy, Physiology, etc., and when he is applying specialized techniques required in task performance.
5.	Coordinating On the basis of analysis of data and of performance review of treatment objectives and requirements, decides time, place and sequence of operations of a process for treatment of a patient, and/or decides need for revision of goals, systems, policies or procedures. Includes execution of decisions and/or reporting on events.
NOTE:	Tasks that are performed by the physician's assistant on this level would take place in emergency situations or in outlying rural areas when a patient's condition requires a critical decision in treatment. The physician, it may be assumed, is simply not available.

SCALES OF WORKER FUNCTIONS

People Functions Scale

In jobs where people are not involved in a major way, note that they are at least present in supervision.

LEVEL	DEFINITION
1A	TAKING INSTRUCTIONS-HELPING Attends to the work assignment, instructions, or orders of supervisor. No immediate response or verbal exchange is required unless clarification of instruction is needed.
1B	SERVING Attends to the needs or requests of people or animals, or to the expressed or implicit wishes of people. Immediate response is involved.
2	EXCHANGING INFORMATION Talks to, converses with, and/or signals people to convey or obtain information, or to clarify and work out details of an assignment, within the framework of well-established procedures.
3A	COACHING Befriends and encourages individuals on a personal, caring basis by approximating a peer or family-type relationship either in a one-to-one or small group situation, and gives instruction, advice, and personal assistance concerning activities of daily living, the use of various institutional services, and participation in groups.
3B	PERSUADING Influences others in favor of a product, service, or point of view by talks or demonstration.
3C	DIVERTING Amuses others.
4A	CONSULTING Serves as a source of technical information and gives such information or provides ideas to define, clarify, enlarge upon, or sharpen procedures, capabilities, or product specifications.
4B	INSTRUCTING Teaches subject matter to others, or trains others, including animals, through explanation, demonstration, practice, and test.
4C	TREATING Acts on or interacts with individuals or small groups of people or animals who need help (as in sickness) to carry out specialized therapeutic or adjustment procedures. Systematically observes results of treatment within the framework of total personal behavior because unique individual reactions to prescriptions (chemical, physician's, behavioral) may not fall within the range of prediction. Motivates, supports, and instructs individuals to accept or cooperate with therapeutic adjustment procedures, when necessary.
5	NEGOTIATING Exchanges ideas, information, and opinions with others on a formal basis to formulate policies and programs on an initiating basis (e.g., contracts) and/or arrives at resolutions of problems growing out of administration of existing policies and programs, usually after a bargaining process.
6	MENTORING Deals with individuals in terms of their overall life adjustment behavior in order to advise, counsel, and/or guide them with regard to problems that may be resolved by legal, scientific, clinical, spiritual and/or other professional principles. Advises clients on implications of diagnostic or similar categories, courses of action open to deal with a problem, and merits of one strategy over another.

How the People Function Scale Applies to the Physician's Assistant

"People" for the most part would consist of patients, their families, physicians, nurses, technicians and other medical personnel.

LEVEL	DEFINITION
1A	Taking Instruction - Helping Attends to routine work assignment, instruction, or orders of supervising physician. No response or verbal exchange is required at this level.
1B	Serving Attends to the needs or requests of patients, or people, et al. (cf. above definition) or to the expressed or implicit wishes of patients. Immediate response is involved (eg. attending the requests of elderly patients, or needs of incapacitated patients in getting positioned on an examination table.)
2	Exchanging Information Talks to, converses with, and/or signals people to convey or obtain information, or to clarify and work out details of an assignment, within the framework of well-established procedures. (This takes into account normal verbal interchange between the physician's assistant and people, as defined above.)
3A	Coaching Befriends and encourages individuals (patients/their family members) a personal, caring basis by approximating a peer of family-type relationship either in a one-to-one or small group situation, and gives instruction, advice, and personal assistance concerning activities of daily living, the use of various institutional services, and participation in groups. (This takes into account the physician's assistant dealing with patients to obtain cooperation, etc., and family members - explaining treatment plan, requirements to relatives in a humane, caring fashion.)
3B	Persuading Influences others in favor of a product, service, or point of view by talks or demonstration. (This function is on the same level, when the physician's assistant is trying to convince patients of seriousness of a situation, or to comply with the physician's orders, he is persuading.)
3C	Diverting Amuses others to entertain or distract individuals and/or audiences or to lighten a situation. (Example of this function would be chatting with patients prior to special treatment to relieve anxieties and fears.
4A	Consulting. Serves as a source of technical information and gives such information or provides ideas to define, clarify, enlarge upon, or sharpen procedures, capabilities, or product specifications. (Eg, confering with patients, relatives, explaining interpreting ailment, causes, prescribe remedy, what to expect in the future and answer questions on such matters. Also, confering with physician as source of special information on a patient, or presenting, explaining carefully worked out summary of findings for his approval.)
4B	Instructing Teaches subject matter to others, or trains others through explanation, demonstration, practice, and test. (eg., instructing a group of patients on a specific subject, procedures. Instructing other personnel in the physician's office (or hospital) in use, of specialized equipment.
4C	Treating Acts on or interacts with individuals or small groups of people who need help (as in sickness) to carry out specialized therapeutic or adjustment procedures. Systematically observes results of treatment within the framework of total personal behavior because unique individual reactions to prescriptions (chemical, physician's, behavioral) may not fall within the range of prediction. Motivates, supports, and instructs individuals to accept or cooperate with therapeutic adjustment procedures, when necessary.
1.	The physician's assistant participates in the therapy plan, prescribes treatment for minor conditions (uncomplicated upper respiratory infection-without fever) as defined by the physician in accordance with standing orders set forth by the physician (including first aid.)
2.	Emergency Care - In the absence of the physician in accordance with orders, provides first aid for acute emergency procedures and triage for seriously ill or injured patients.

SCALES OF WORKER FUNCTIONS

Things Functions Scale

Things should be understood to refer to tangibles. In jobs where tangibles are not involved in a major way, they are at least present in the casual use of desk-top equipment (pencils, telephones, etc.) or such items as blackboards, chalk, etc. It is important to note that workers primarily involved with data or people are also involved with tangibles in this way, but on a very low level.

Note: Workers (e.g., non-working Foremen, Expediters) who make decisions and/or take action concerning the disposition of things (tools, machines, materials, etc.) are considered in this respect to be working with data (information, ideas). Working with things means, literally, the physical interaction with things.

LEVEL	DEFINITION
1A	HANDLING Works (cuts, shapes, assembles, etc.), digs, moves, or carries objects or materials where objects, materials, tools, etc., are *one or few* in number and are the primary involvement of the worker; *precision* requirements are *relatively gross.* includes the use of dollies, handtrucks, and the like.
1B	FEEDING-OFFBEARING Inserts, throws, dumps, or places materials into or removes them from machines or equipment which are automatic or tended/operated by other workers: precision requirements are built-in, largely out of control of worker.
1C	TENDING Starts, stops, and monitors the functioning of machines and equipment set up by other workers, where the precision of output depends on keeping one to several controls in adjustment, in response to automatic signals according to specifications. Includes workers in *all* machine situations where there is no significant setup or change of setup, where cycles are very short, alternatives to non-standard performance are few, and adjustments are highly prescribed.
2A	MANIPULATING Works (cuts, shapes, assembles, etc.), digs, moves, guides, or places objects or materials where objects, tools, controls, etc., are *several* in number; precision requirements range from gross to fine. Includes workers who use ordinary portable powered tools with interchangeable parts, waiting on tables, and the use of ordinary tools around the home such as kitchen equipment, garden tools, etc.
2B.	OPERATING-CONTROLLING Starts, stops, controls, and adjusts machines or equipment designed to fabricate and/or process data, people, or things. The worker may be involved in activating the machine, as in typing or turning wood, or the involvement may occur primarily at start-up and stop as with semiautomatic machines. *Operating machines* involves setting up and adjusting the machine and/or material as work progresses. *Controlling equipment* involves monitoring gauges, dials, etc., and turning valves and other devices to control such items as temperature, pressure, flow of liquids, speed of pumps, and reactions of materials. *Setup* involves initial setting of several controls to achieve specified output in automatic or semiautomatic machinery. Includes workers who operate typewriters, PBX switchboards, and other office equipment where the setup, changes of setup, and adjustments require more than cursory demonstration and checkout.
2C	Driving-Controlling Starts, stops, and controls the actions of machines for which a course must be steered or guided in order to fabricate, process, and/or move things or people. Actions regulating controls require continuous attention and readiness of response. Use this rating if use of vehicle required in job even if job is concerned primarily with people or data.
3A	PRECISION WORKING Works, moves, guides, or places objects or materials according to standard practical procedures, where the number of objects, materials, tools, etc., embraces an entire craft and accuracy expected is within final finished tolerances established for the craft.
3B	SETTING UP Readies machines or equipment to perform their functions, change their performance, or restore their proper functioning if they break down by installing or altering jigs, fixtures, attachments, etc., according to job order or blueprint specifications; accuracy only partly dependent on setup—may involve one or a number of machines for other workers or for worker's own operations.

How the Things Function Scale Applies to the Role of Physician's Assistant

Because the Upjohn F.J.A. Things Scale is oriented toward industry, it is difficult to apply it directly to the physician's assistant's role. The following presentation preserves the ordinal levels of the Scale, but attempts to relate "Things" directly to the instruments and equipment handled by the physician's assistant.

LEVEL	APPLICATION TO PHYSICIAN'S ASSISTANT
1A	Routine office equipment Utilizes routine office equipment, i.e., pencils, pens, record forms, all desk top tangibles. Also, basic instruments such as thermometer, weighing scales, simple equipment for screening vision and hearing, stethoscope, sphygmomanometer.
1B	Basic diagnostic equipment for examinations Utilizes microscope, cell counting chambers, slides, stains, equipment for urine and gastric analysis tests, syringes, pipettes, percussion hammer, tuning fork, otoscope, ophthalmoscope, proctoscope, etc.
2A	Treatment equipment Utilizes simple suturing equipment and materials for minor lacerations, splint and cast application and removal, dressings, inhalation therapy and physio-therapy equipment, surgical equipment for assisting surgeons.
2B	Operating and controlling special diagnostic equipment Starts, stops, controls, and adjusts equipment designed for visualizing or testing body functions, i.e., E.K.G., x-rays of chest and extremities, gastric intubation, intravenous equipment, catheters, etc. (depends upon type of specialty training, i.e., E.E.G.). Checks equipment for accurate performance, restores proper functions by replacement of basic parts which may be faulty parts, adjusts attachments according to requirements.
2C	Driving-controlling Drives vehicles (car, jeep, pickup truck, ambulance) to reach and/or transport patients when necessary.
3A	Laying out specialized instruments and equipment Arranges, lays out emergency room supplies, surgical equipment and instruments for operating room, delivery room supplies, equipment instruments, checks sterility markers, intravenous solutions, tractions, etc. Performs suturing in emergency situations when physician is not available.

GENERAL EDUCATIONAL DEVELOPMENT

SCALES OF GENERAL EDUCATIONAL DEVELOPMENT

Reasoning Development Scale

The Reasoning Development Scale is concerned with knowledge and ability to deal with theory versus practice, abstract versus concrete, and many versus few variables.

LEVEL	DEFINITION
1	* Have the common sense understanding to carry out simple one- or two-step instructions in the context of highly standardized situations. * Recognize unacceptable variations from the standard and take emergency action to reject inputs or stop operations.
2	* Have the common sense understanding to carry out detailed but uninvolved written or oral instructions. * Deal with problems involving a few concrete variables in or from standardized situations.
3	* Have the common sense understanding to carry out instructions furnished in written, oral, or diagrammatic form. * Deal with problems involving several concrete variables in or from standardized situations.
4	* Have knowledge of a system or interrelated procedures, such as bookkeeping, internal combustion engines, electric wiring systems, nursing farm management, ship sailing, or machining. * Apply principles to solve practical, everyday problems and deal with a variety of concrete variables in situations where only limited standardization exists. * Interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.
5	* Have knowledge of a field of study (engineering, literature, history, business administration) having immediate applicability to the affairs of the world. * Define problems, collect data, establish facts, and draw valid conclusions. * Interpret an extensive variety of technical material in books, manuals, texts, etc. * Deal with some abstract but mostly concrete variables.
6	* Have knowledge of a field of study of the highest abstractive order (e.g., mathematics, physics, chemistry, logic, philosophy, art criticism). * Deal with nonverbal symbols in formulas, equations, or graphs. * Understand the most difficult classes of concepts. * Deal with a large number of variables and determine a specific course of action (e.g., research, production) on the basis of need.

Scales of General Educational Development

low the Reasoning Development Scale Applies to the Role of Physician's Assistant

LEVEL	DEFINITION
1.	Have the common sense/understanding to carry out uninvolved or oral instructions in highly standardized physician's office and hospital activities. Recognize unacceptable variation and make decisions to stop and refer situation to the physician or other appropriate health personnel (superiors).
2.	Have the common sense/understanding to carry out detailed but uninvolved written or oral instructions (e.g., obtaining initial patient complaints). Deal with problems involving few concrete variables from standardized situations (e.g., rearranging patient appointments within acceptable variations).
3.	Have the common sense/understanding to carry out instructions furnished in written, oral or diagrammatic form (e.g., administer simple treatment (prescribed) to patients following standing orders). Deal with problems involving a greater number of concrete variables in or from standardized situations (e.g., pursuing a medical and social history well beyond normal requirements when the need arises).
4.	Have knowledge of the medical care system procedures utilized by employing physician. Apply principles and techniques to meet minor everyday or emergency needs of patients which require variation from the standard norms and procedures.
5.	Have the working knowledge of the basic and clinical sciences. Define problems, collect data, establish facts, draw valid conclusions (e.g., performing and reporting on the most involved aspects of the physical examination and social history). Interpret an extensive variety of technical medical materials and techniques in books, manuals, texts, etc. Deal with the abstract variables necessary to perform the highest level tasks of the physician's assistant role.

SCALES OF GENERAL EDUCATIONAL DEVELOPMENT

Mathematical Development Scale

The Mathematical Development Scale is concerned with knowledge and ability to deal with mathematical problems and operations from counting and simple addition to higher mathematics.

LEVEL	DEFINITION
1	* Counting to simple addition and subtraction; reading, copying, and/or recording of figures.
2	* Use arithmetic to add, subtract, multiply, and divide whole numbers.
3	* Make arithmetic calculations involving fractions, decimals, and percentages.
4	* Perform ordinary arithmetic, algebraic, and geometric procedures in standard practical applications.
5-6	* Have knowledge of advanced mathematical and statistical techniques such as differential and integral calculus, factor analysis, and probability determination. * Work with a wide variety of theoretical mathematical concepts. * Make original applications of mathematical procedures, as in empirical and differential equations.

Scales of General Educational Development

low the Mathematical Development Scale Applies to the Role of Physician's Assistant

LEVEL	DEFINITION
1.	Count, do simple addition and subtraction; read, copy, and/or record figures.
2.	Use arithmetic to add, subtract, multiply, and divide whole numbers.
3.	Make arithmetic calculations involving fractions, decimals, and percentages.
4.	Perform ordinary arithmetic, algebraic, and geometric procedures in standard practical applications (i.e., birth and death rates, disease incidence rates, etc.).
5.	Have knowledge of mathematical and statistical techniques sufficient to understand measures of central tendencies and probability determinations as used in the medical literature.
6.	Work with a wide variety of theoretical mathematical concepts. Make original applications of mathematical procedures, as in empirical and differential equations.
NOTE:	Unless the physician's assistant becomes involved in research activities, Level 6 does not apply.

SCALES OF GENERAL EDUCATIONAL DEVELOPMENT

Language Development Scale

The Language Development Scale is concerned with knowledge and ability to deal with oral or written language materials from simple instructions to complex sources of information and ideas.

LEVEL	DEFINITION
1	* Cannot read or write but can follow simple oral, "pointing-out" instructions. * Sign name and understand ordinary, routine agreements when explained, such as those relevant to leasing a house; employment (hours, wages, etc.); procuring a driver's license. * Read lists, addresses, safety warnings.
2	* Read comic books, "true confession" or "mystery" type magazines (short sentences; simple, concrete vocabulary; words that avoid complex Latin derivations). * Converse with service personnel (waiters, ushers, cashiers). * Copy verbal records precisely without error. * Keep taxi driver's trip record.
3	* Read material on level of *The Reader's Digest* and straight news reporting in popular "mass" newspapers. * Comprehend ordinary newscasting (uninvolved sentences and vocabulary with focus on events rather than on their analysis). * Copy verbal material from one record to another, catching gross errors in grammar. * Fill in report forms, such as Medicare forms, employment applications and card form for income tax. * Conduct house-to-house surveys to obtain common census-type information or market data, such as preferences for commercial products in everyday use.
4	* Have language ability to take and transcribe dictation, make appointments, and sort, route, and file the mail according to subject. * Write routine business correspondence reflecting standard procedures. * Interview job applicants to determine work best suited for their abilities and experience; contact employers to interest them in services of agency. * Understand technical manuals and verbal instructions, as well as drawings and specifications, associated with practicing a craft. * Guide people on tours through historical or public buildings, tell relevant anecdotes, etc. * Conduct opinion research surveys involving stratified samples of the population.
5	* Report, write, or edit articles for magazines which, while popular, are of a highly literate nature (e.g., *The New Yorker*, *Saturday Review*, *Scientific American*). * Prepare and deliver lectures for audiences that seek information about the arts, sciences, and humanities in an informal way. * Report news for the newspapers, radio, or TV. * Write copy for advertising. * Write instructions and specifications concerning proper use of machinery. * Write instructions for assembly of prefabricated parts into units.
6	* Report, write, or edit articles for technical and scientific journals or journals of advanced literary criticism (e.g., *Journal of Educational Sociology*, *Science*, The *Physical Review*, *Daedalus*). * Prepare and draw up deeds, leases, wills, mortgages, and contracts. * Prepare and deliver lectures on politics, economics, education, or science to specialized students and/or professional societies. * Comprehend and apply technical engineering data for designing buildings and bridges. * Comprehend and discuss literary works of a highly symbolic nature, such as works in logic and philosophy (e.g., Kant, Whitehead, Russell).

Scales of General Education Development

ow the Language Development Scale Applies to the Role of Physician's Assistant

LEVEL	DEFINITION
1	Comprehend simple oral pointing-out instructions. Read lists, recognize and understand basic medical terms.
2	Comprehend ordinary communications from patients, physicians, and related health personnel. Converse with patients in a normal, exchange-of-information manner. Record patient histories.
3	Ability to communicate with patients, describing their cases/ situations in terms which they can understand. Converse with physicians on fairly detailed and technical matters.
4	Language ability to understand all case record sheets, fill out fairly complex insurance forms. Understand medical procedure manuals and instructions. Ability to understand, converse with others about medical textbooks and current medical journals.
5	Language ability to give oral or written instructions, procedures to other workers. Explain technical matters in terms which disadvantaged patients, families can understand. Understand and report on articles related to clinical studies. Ability to explain and instruct other physician's employees to carry out routine procedures.

FUNCTIONAL JOB ANALYSIS

Definition

A simple definition of functional job analysis as it applies to the physician's assistant is difficult. As used in this project, it is essentially a study of what a physician's assistant should be capable of doing to function effectively as an assistant to a physician. The procedure analyzes the level of general educational development; the level of complexity of the physician's assistant's functions as they pertain to information, patients, and other medical care personnel (people), instruments and equipment (things); the degree of responsibility; the functional and specific knowledge and skills required; and the level of performance standards expected to accomplish a specific task. A brief excerpt from Sidney A. Fine's definition is quoted:

"Functional Job Analysis is probably three things: (1) a conceptual system defining dimensions of work activity and thus a way of conceiving the world of work; (2) an observational method and thus a way of looking at people at work; and (3) a method of analysis, of evaluating the design of work and its performance."(12)

Task Statement

The task statement includes what the physician's assistant does in order to achieve the end result or task output as required by the task's performance standards. The output must be directly related to the subsystem objective. The statement must be sufficiently explicit so that performance standards can be set.

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(12) Fine, Sidney A. "The Role of Functional Job Analysis in Current Manpower Problems." The W.E. Upjohn Institute for Employment Research, Kalamazoo, Michigan.

Performance Standards

The job (task) must be performed according to the standards set by the supervising physician. Performance standards allow both the worker and his supervisor to know on what basis task performance will be evaluated. They are useful only if they are understood and communicated. Qualitative Standards tend to be subjective, and indicate how supervisors and organizations would like tasks to be performed. Quantitative Standards, while in no way exactly objective, are more definite. They state the requirements of the organization for task performance.

In the case of the physician's assistant, the standards for his tasks will be derived from the task itself, the objective to which it contributes and other requirements specified by the supervising physician. Performance standards should be utilized by the physician to measure whether the performance from a qualitative standard (i.e., good patient rapport, number of errors permissible, if any, assignment complete in a specified period of time, complete and accurate description of all abnormal findings, etc.) is acceptable.

Training Content

Training content as used in this project for job analysis involves functional skills and specific skills. Functional skills are those competencies that are acquired in the educational and training program. These competencies enable the physician's assistant to relate adequately to patients, to patient data and information, and to the use of diagnostic and treatment equipment with a degree of skill appropriate to the requirements of the task (level).

Specific skills refer to those competencies that enable the physician's assistant to perform a specific task, that is, a physician's assistant must be familiar with the specific equipment and information required for him to perform a task. Another way of looking at specific content skills is that they consist of all items which the physician's assistant has to know to perform a task on the job site. An illustration would be if the physician's assistant is stationed in the Emergency Room, he would have to know not only how to treat the specific injury of a patient, but what specific medication, etc. to apply and where to get it.

Functional skills and specific content skills are, of course, related because learning occurs on a continuum. The useful distinction is that functional skills are best learned off-the-job and in a classroom, while specific content skills are best learned on-the-job.

Degree of Physician's Assistant Responsibility

The degree of the physician's assistant's responsibility involves prescribed (directed, ordered, limited) functions, activities and procedures which allow very little discretion by the physician's assistant, and discretionary responsibilities. For example, the physician's assistant may be required to write up the patient's historical findings in accordance with a set outline; however, the physician's assistant may use his own discretion as to the sequence in which he obtains the patient's historical data and information. Dr. Fine refers to this as "worker instruction." Dr. Fine has developed a worker instruction scale which utilizes the concept of prescribed and discretionary job content as developed by Jaques and Brown.(13,14) The worker instruction scale has been related to the prescribed and discretionary responsibilities of the physician's assistant which were presented earlier in this report.

Physician's Assistant Functions

The physician's assistant's functions as described in this project relate to what he, as a worker, does in regard to three basic categories: DATA (patient data, office forms, ideas gained from training, etc.), PEOPLE (patients, their families, the physician, etc.), and THINGS (medical equipment and instruments). Each of the three basics involved in the physician's assistant's work can be defined by a scale of functions in which the skill requirements range from the simple to the complex. These functions are considered as fundamental modules organized to provide two measures on the basis of which all jobs (tasks) can be compared. The measures are: 1) Level and 2) Orientation.

1) Level: This is the measure of the relative complexity of the behavior in dealing with DATA, PEOPLE and THINGS. It is expressed by selecting the function that best fits the worker's behavior.

NOTE: The Functional Job Analysis Scales are universal and relate to all fields of work. They were related specifically to the physician's assistant earlier in the text.

2) Orientation: This is the measure of the relative importance of performance standards set for a given task. It is expressed by assigning a percentage in units of five to ten to each of the three functions (DATA, PEOPLE, THINGS) so that they add up to 100%. For example, in history

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(13) Jaques, Elliott. Measurement of Responsibility. Harvard University Press, Cambridge, Massachusetts. 1956. (Chapter 3.)

(14) Brown, Wilfred. Exploration in Management. John Wiley and Sons, New York. 1960. (Chapter 2.)

taking the greatest proportion of the action involves data gathering by interactions with the patient; thus, it may be estimated (or observed) that the job is 60% DATA function, 35% PATIENT function, and 5% use of equipment. In this instance the only material things utilized are paper and pencil.

General Educational Development

General Educational Development involves the physician's assistant's past and present formal and informal education, training, and experience. The G.E.D. requirements are determined by objective job analyses as necessary and sufficient to achieve average performance in the specific tasks of the physician's assistant's job. The requirements should focus on the tasks performed in relation to the DATA, the PATIENT and the EQUIPMENT used in these tasks. G.E.D. requirements are directed toward three aspects of the results of formal and informal education of the physician's assistant: 1) reasoning capacity; 2) mathematical ability; and 3) language skills.

Reasoning relates to concepts, problem solving, making judgments, and carrying out instruction. Mathematical ability relates to arithmetic, algebraic, and geometric operations with numbers and associated symbols. Language skill relates to understanding, reading, writing, and speaking the words, expressions, idioms, and ideas of the English language. Each of the three educational development areas involved, can, as with functions, be defined by a scale of ability which ranges from the simple to the complex. The G.E.D. scales were presented earlier in this report.

NOTES ON THE USE OF FUNCTIONAL JOB ANALYSIS

A. TASK ANALYSIS PROVIDES A METHOD FOR RATIONALIZING THE DELEGATION OF WORK.

Delegation of work, under any circumstances is not an easy proposition. It requires a way of defining and measuring the "step" or "piece" of work that is to be assigned to a subordinate worker. That assignment must be understood by the worker so he can meet the performance standards to which he is held accountable.

Historically, the master-journeyman-apprentice model provided a way of doing this. The apprentice worked under the master and took on increasingly complex tasks until he was certified as a journeyman. If he could excel, he became a master.

That sort of arrangement no longer works in the professions. There is too much knowledge and technology. The physician has to face many complex problems when it comes to delegating tasks to lower level medical personnel. Such questions arise as:

- How is work divided up and defined so it can be assigned to paraprofessional workers?
- What must the physician reserve to himself (what cannot be delegated)?
- How can work be defined and ranked according to levels of complexity so it can be delegated to different kinds of workers?
- What decision-making limits should be placed on subordinate medical personnel? How can this be done?
- A physician can delegate the taking of a patient's history or the performance of a physical examination to a physician's assistant. Does the assistant also take the patient's measurements, answer the telephone, schedule patient appointments? In short, where does the delegation of work begin and end? How many roles subordinate to the physician should be established? What factors determine this?
- When it comes to recruitment and selection of workers, what should the qualifications be? Who determines this, and on what basis?

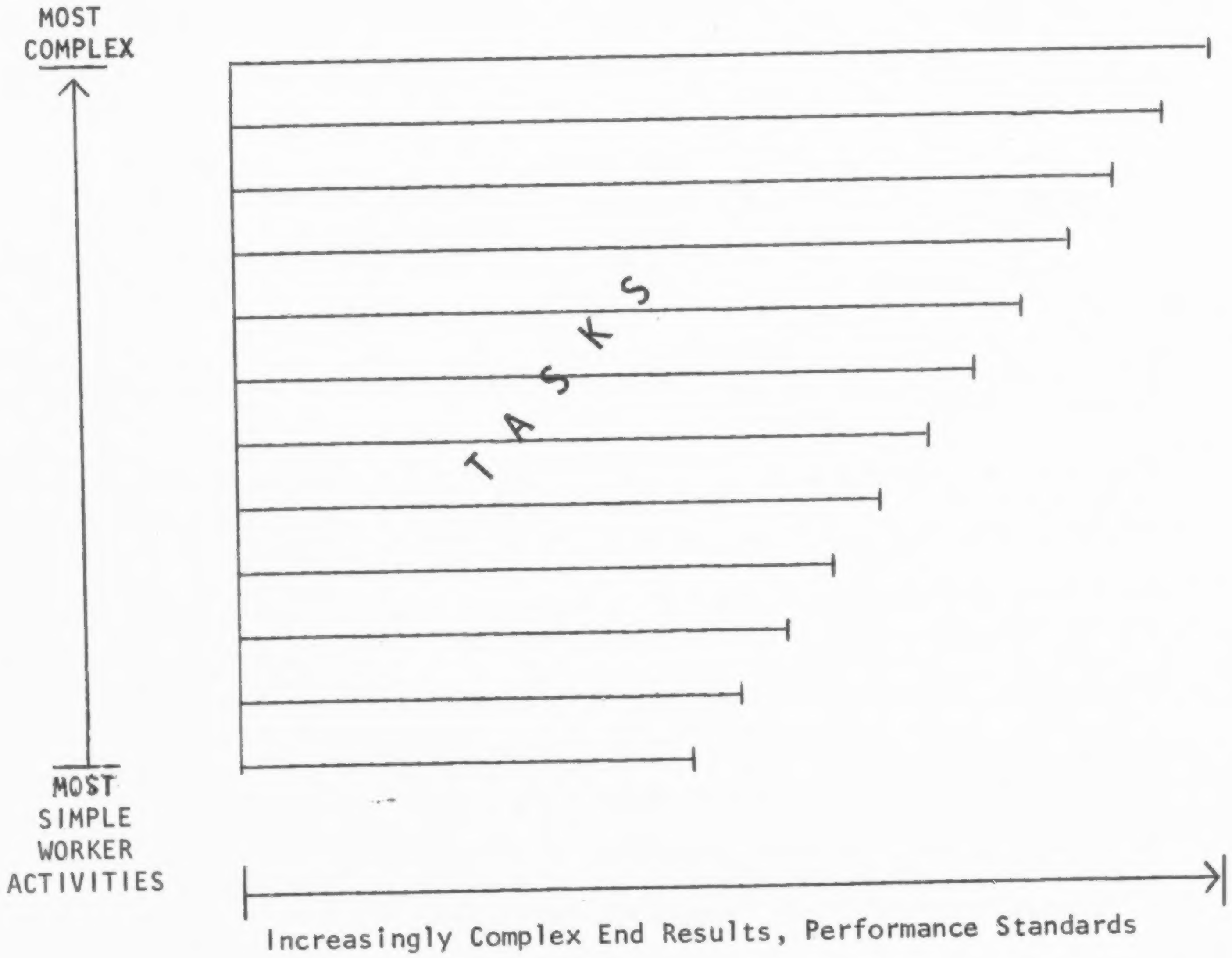
The defining and clarification of existing subordinate medical roles and the setting up of new positions seems to require a technical approach of its own. Functional job analysis offers one technical approach to the problem. It will not yield any absolute answers, but what it will do is to enable physicians to examine and define units of work (tasks) and arrive at a rationale for ranking tasks from the most simple to the most complex levels. In short, it rationalizes the delegation of work from intuition about a given worker's ability to perform, to a system that analyzes levels of work throughout the field. Task analysis gives information on which decisions can be made; but like any instrument, it will not make decisions.

B. ILLUSTRATION OF THE BASIC ASSUMPTIONS UNDERLYING FUNCTIONAL JOB ANALYSIS AND HOW IT CAN RELATE TO MEDICAL SERVICE WORK.

Before examining the task statements, it would be well to examine some of the major underlying assumptions. This will be helpful in relating the Functional Job Analysis Scales to medical service work.

Assumption 1

Figure 3.


MOST
COMPLEX
TASKS
MOST
SIMPLE
WORKER
ACTIVITIES

Increasingly Complex End Results, Performance Standards and Training

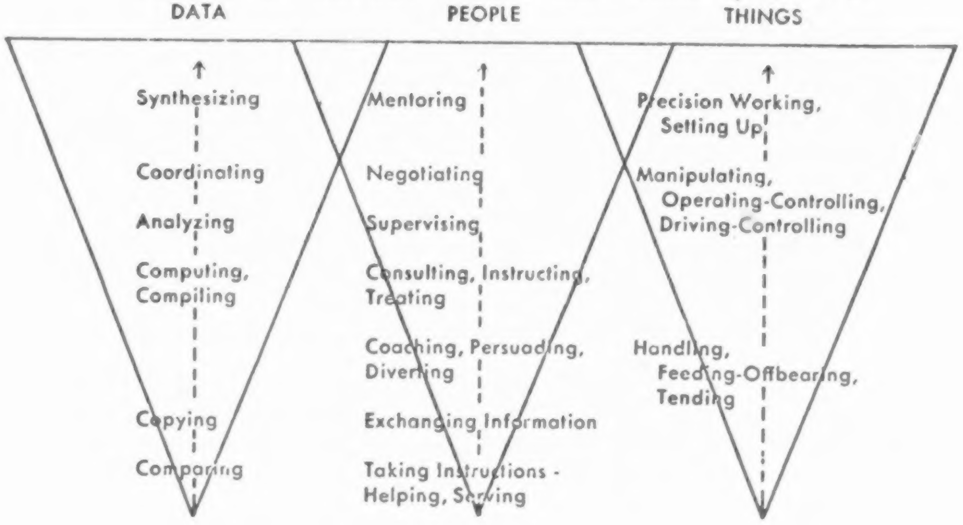
Assumption 2

Functional job analysis, because it utilizes ordinal scales, offers a rationale for classifying and grouping tasks according to increasingly complex worker functions.

MOST COMPLEX
SIMPLE

Figure 4.

Scales of Worker Functions Summary Chart*


DATA
PEOPLE
THINGS
Synthesizing
Coordinating
Analyzing
Computing, Compiling
Copying
Comparing
Mentoring
Negotiating
Supervising
Consulting, Instructing, Treating
Coaching, Persuading, Diverting
Exchanging Information
Taking Instructions - Helping, Serving
Precision Working, Setting Up
Manipulating, Operating-Controlling, Driving-Controlling
Handling, Feeding-Offbearing, Tending

Note:

Each successive function usually or typically involves all those that follow in ascending order.

The functions separated by a comma are separate functions on the same level separately defined. They are on the same level because empirical evidence does not make a hierarchical distinction clear.

The hyphenated functions, Taking Instruction-Helping, Operating-Controlling, and Driving-Controlling are single functions.

Setting Up, Operating-Controlling, Driving-Controlling, Feeding-Offbearing, and Tending are special cases involving machines and equipment of Precision Working, Manipulating, and Handling, respectively, and hence are indented under them.

By arranging the functions according to a threefold breakdown or complexity, as shown in Figure 2, it is possible to describe a task as "simple, low-level" or "complex, high-level."

Note:

These scales, and how they apply to the role of the physician's assistant, were presented earlier in this report.

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* "A Systems Approach to Task Analysis and Job Design." The W.E. Upjohn Institute for Employment Research, Washington, D.C. 1970. p. 37.

Assumption 3

While in the past, professional and highly skilled workers frequently performed the whole range of tasks, the simple and the complex, much has been learned on how to define more simple tasks and delegate out these tasks to new kinds of workers. The new workers took on more complex tasks as they gained experience and more training. Typical of this arrangement is the physician's associate or assistant, technical assistant or technician aide grouping of medical service personnel. Just what tasks can and should be delegated downward and how to organize them into positions remains a problem.

Figure 5.

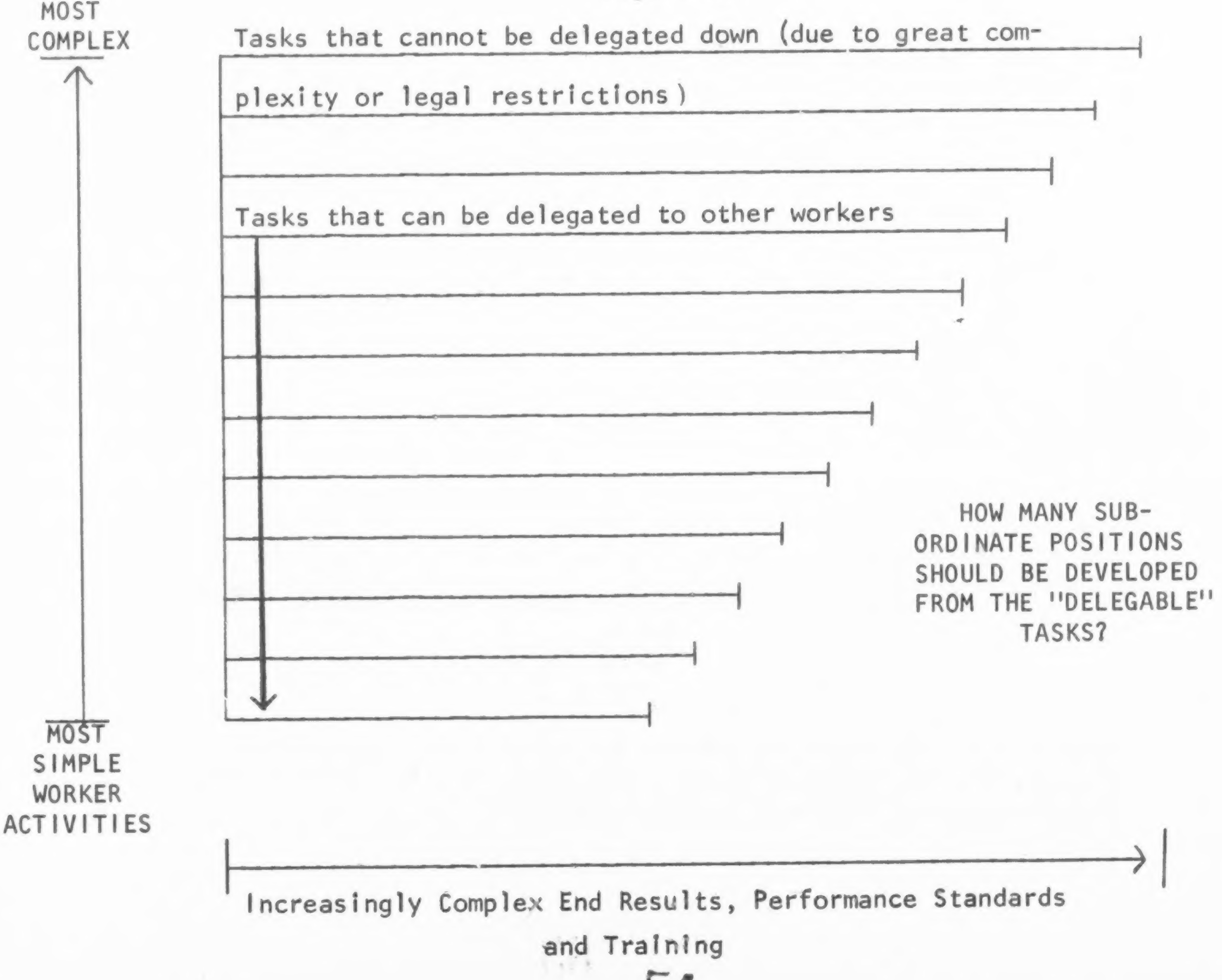
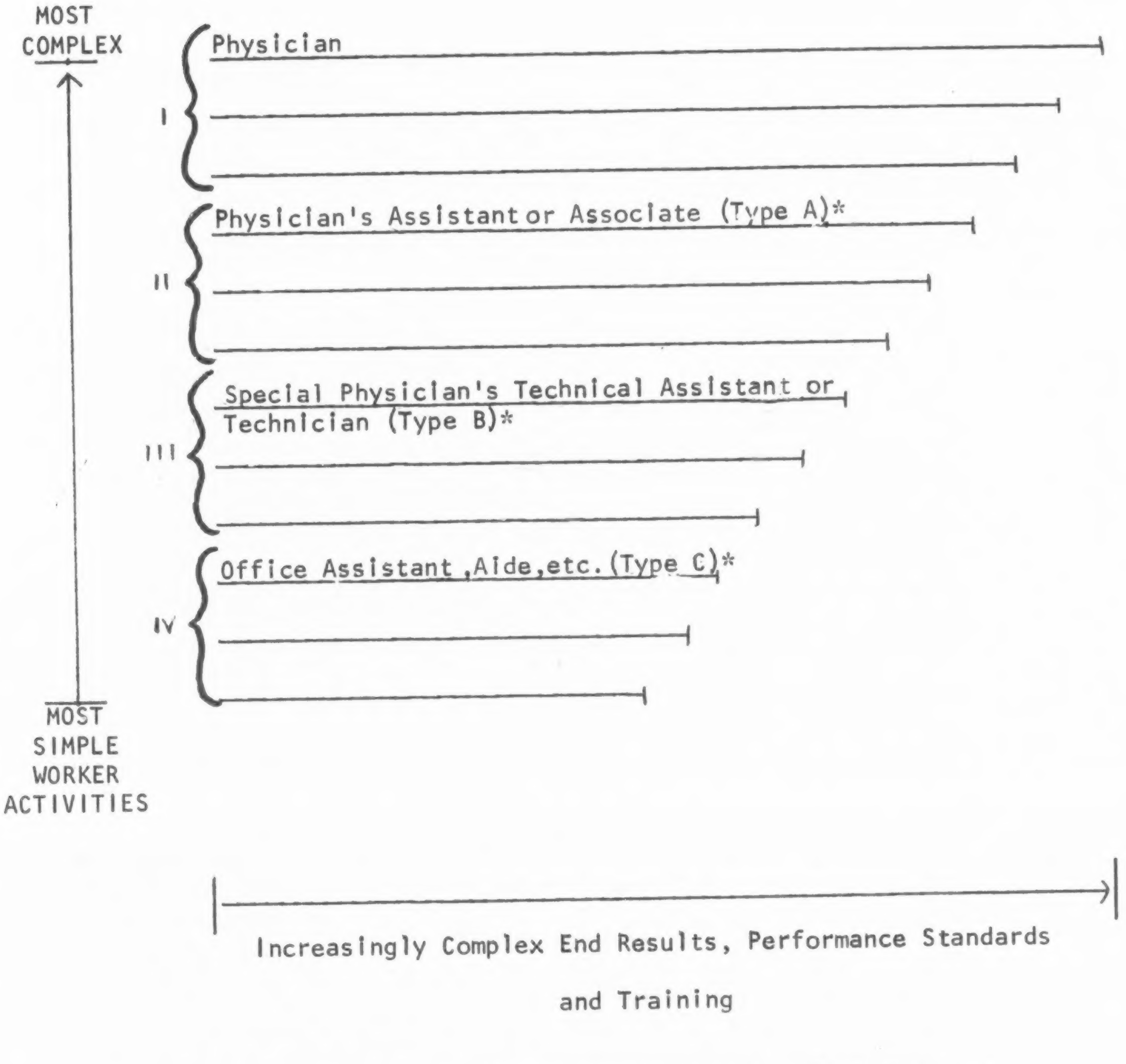

MOST COMPLEX
Tasks that cannot be delegated down (due to great complexity or legal restrictions)
Tasks that can be delegated to other workers
HOW MANY SUBORDINATE POSITIONS SHOULD BE DEVELOPED FROM THE "DELEGABLE" TASKS?
MOST SIMPLE WORKER ACTIVITIES
Increasingly Complex End Results, Performance Standards and Training

Illustration of Four Levels of Task Clusters

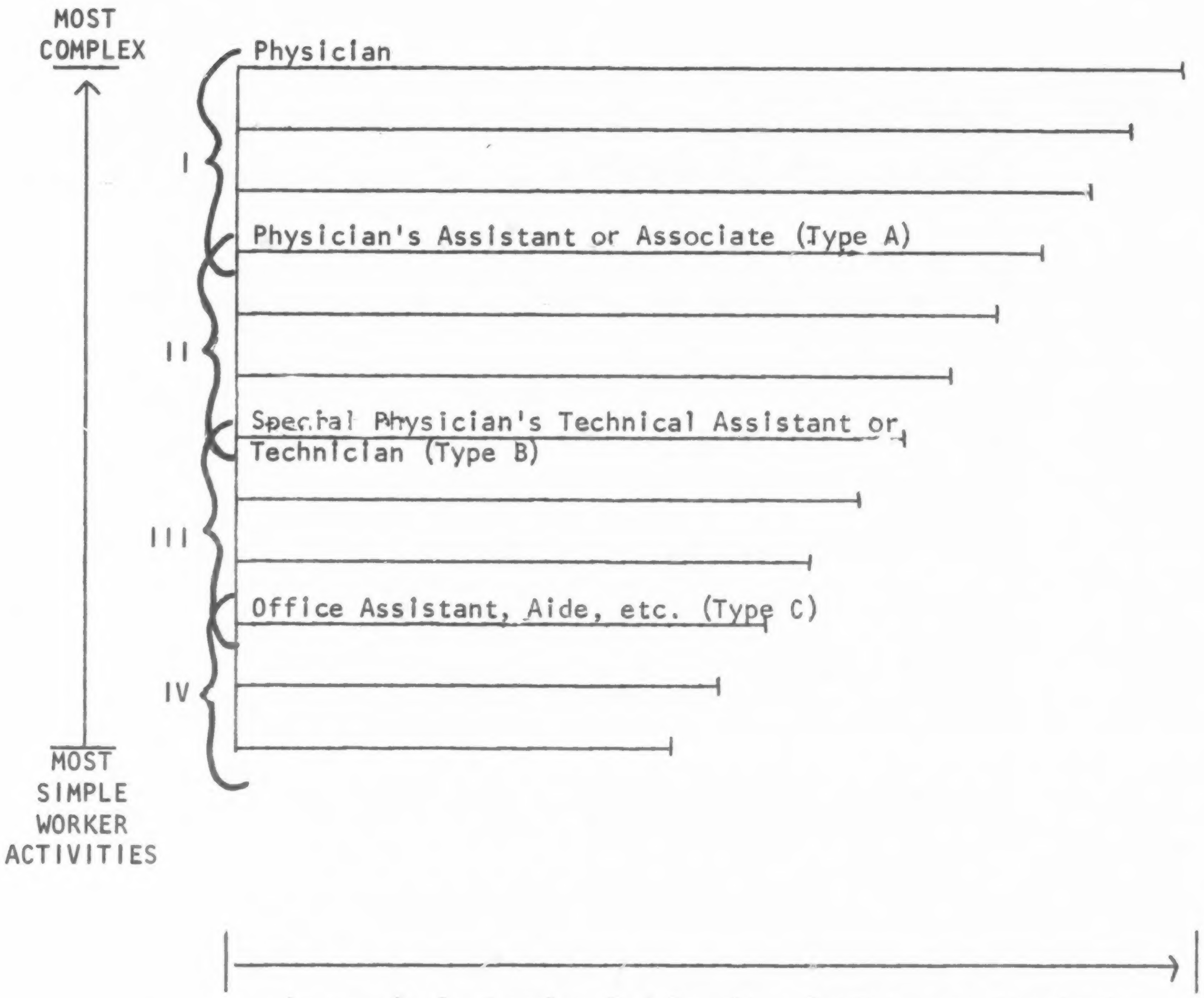
Figure 6.
General Groupings of Four Positions


MOST COMPLEX
MOST SIMPLE WORKER ACTIVITIES
I
Physician
II
Physician's Assistant or Associate (Type A)*
III
Special Physician's Technical Assistant or Technician (Type B)*
IV
Office Assistant, Aide, etc. (Type C)*
Increasingly Complex End Results, Performance Standards and Training

* Type A,B,C Assistant as defined by the A.A.M.C. Task Force on Physician's Assistant Programs, see page 94 for definitions. Total statement is found in Appendix III.

Realistically, there are no absolute markings on an ordinal scale; therefore, the four groupings of tasks will "spill over" (overlap) dividing lines.

Figure 7.


MOST
COMPLEX
MOST
SIMPLE
WORKER
ACTIVITIES
I
II
III
IV
Physician
Physician's Assistant or Associate (Type A)
Special Physician's Technical Assistant or Technician (Type B)
Office Assistant, Aide, etc. (Type C)

Increasingly Complex End Results, Performance Standards and Training

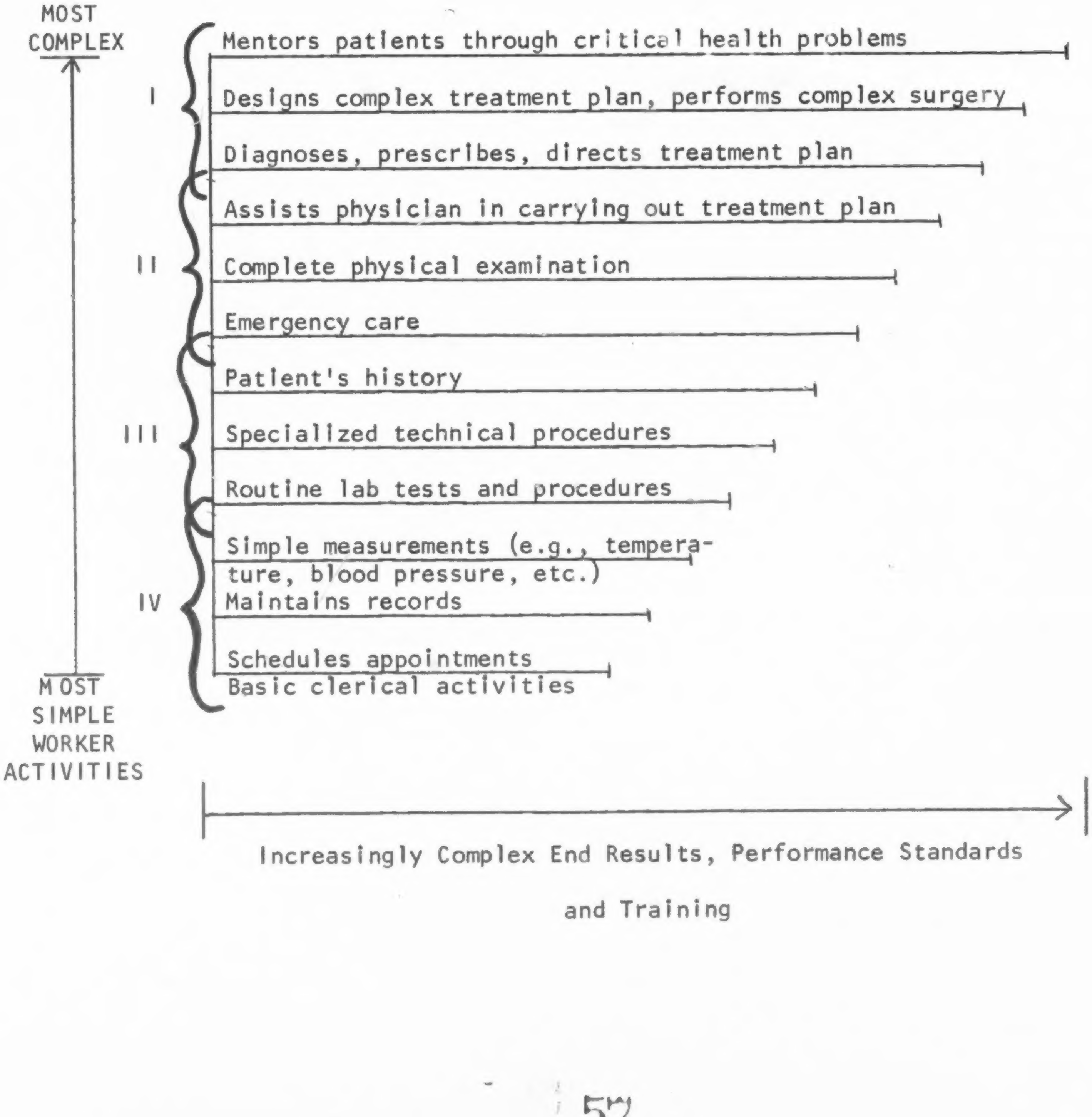
Assumption 4

a) Medical service tasks can be defined according to levels of complexity.

b) Once defined, they can be grouped into basic clusters.

Summary of Sample, Illustrative Tasks, Indicating Difference of Level and Complexity

Figure 8.


MOST COMPLEX
I
Mentors patients through critical health problems
Designs complex treatment plan, performs complex surgery
Diagnoses, prescribes, directs treatment plan
II
Assists physician in carrying out treatment plan
Complete physical examination
Emergency care
III
Patient's history
Specialized technical procedures
Routine lab tests and procedures
IV
Simple measurements (e.g., temperature, blood pressure, etc.)
Maintains records
Schedules appointments
Basic clerical activities
MOST SIMPLE WORKER ACTIVITIES
Increasingly Complex End Results, Performance Standards and Training

C. TASK ANALYSIS ALLOWS TRAINING INSTITUTES TO FOCUS IN ON PARAPROFESSIONAL ROLES IN THE MEDICAL FIELD AND MAKE DECISIONS AS TO WHAT ROLES THEY CAN COMPETENTLY TRAIN WORKERS FOR.

Is it a requirement that only university medical schools or highly staffed hospitals train physician's assistants? Should, for example, community colleges restrict themselves from training beyond the A.D. nurse, medical technician or medical secretary (medical assistant) levels?

The answers to these questions are not easy, but some indications are given when it becomes known what these workers do, what tasks constitute their roles, how complex they are, what performance standards these workers must meet and what kind of training will enable the workers to meet standards.

One classic view of training medical personnel is that the training be long and that the trainee be crammed full of information so that he will not be caught short in practice. Another view is that work should determine the training content. Neither of these views is mutually exclusive, but task analysis leans toward the latter. It focuses on the work and on the level of work to be performed by a person and derives the training content from tasks to be performed rather than a priori curricula that will, in a diffuse manner, cover all the work a trainee will be expected to do.

Task analysis will reveal the level of work (complexity) that is to be done and the training content, level of training, required for the worker to perform. Because this information is focused on the tasks in a job role, it will help a training institute decide whether or not it has the resources to train allied health workers successfully.

Decisions to train different levels of allied health workers are based on the objectives of training, training resources and constraints (limits of money and personnel). Unless an institution keeps these factors in balance, the objectives of training will not be accomplished.

THE TASK STATEMENTS

Explanatory Note

Before examining the task statements of the physician's assistant, the following notes must be considered.

1. The task's relationship to the system.

   In the description and examples of the systems approach utilized in this report, the link between objectives, goals and purpose is evident. The end results of objectives contribute towards implementation of goals. The accumulated end result of goals fulfills, or moves towards fulfillment of, the system purpose. The task bears a similar relationship to objectives. The end results of several tasks implement objectives. In this way, the worker becomes linked to the system.

   All workers in a health service organization perform tasks. Hospital administrators perform tasks; physicians perform other tasks; physician's assistants perform still other tasks and so on, including the very important tasks of the janitorial staff. The end results of these tasks produce the total services offered by the health organization.

2. The basic structure of the task statement.

   The task statement has two essential parts - the end result and the worker activity required to bring about the end result. The end results, as indicated above, are those steps which must be carried out to accomplish the organization's objectives. The functions listed on pages 2, 3 and 4 of this report illustrate the end results of some physician's assistant tasks. The other "part" of the task is the worker activity, what he does to accomplish the end result. When we consider the array of tasks performed by workers in a health organization, we realize that many different workers are "doing" many different things to accomplish their tasks. They are also functioning on many different levels. The administrator is engaged in actions involving him with DATA. So is the receptionist. They function, however, on different levels. The Worker Function Scales classify and differentiate the level of activity carried out by the different workers. In dealing with the physician's assistant's tasks, emphasis has been placed on describing his work action and linking it to a specific end result. It is on this basis alone that an accurate and reliable analysis of tasks can be made.

3. The task's relationship to level of assistant's competence. The sample of tasks* included in this section were chosen to illustrate the very simple to the most complex task performed by a physician's assistant or associate (Type A). While the physician's assistant (Type A) needs to know how to perform these tasks, the intermediate and simple tasks can be delegated if other level assistants are available (i.e., special technical assistant or technician - Type B - and/or office assistant, aide - Type C. The tasks a Type B assistant and a Type C assistant could be delegated will be so indicated in the task statements which follow).

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* The total tasks probably number over 400.

The sample task statements are grouped to illustrate how the tasks contribute to accomplishment of a specific objective listed under a subsystem.

These task statements do not include the total number of tasks necessary to accomplish all of the objectives or even one single objective as listed under the three training subsystems. However, they are sufficient to determine the degree of responsibility (instruction) and the functional and general educational levels of ability of the assistant necessary to carry out the sample task and similar level tasks. Additional task statements would vary only in the content.

TASK STATEMENTS

TASK STATEMENTS

Subsystem I - Basic Training Program

At the end of the training, the physician's assistant will be able to implement the following objective:

Objective (development of Objective #11, subsystem I on page 16)

Within the general time frame set by the physician, performs and records the findings of a complete physical examination.

Sample Task Statements (performed by the physician's assistant) which contribute toward implementing the stated objective:

	Type Asst. Who Could Perform the Task
1) Observes patient, prior to and throughout the physical exam, scanning body regions, patient's general appearance, in order to detect visible clues, signs, markings, etc. indicating abnormalities, ill health.	B
2) Wraps cuff around patient's arm (arms and/or leg) adjusting tubes and valve of sphygmomanometer, positions stethoscope under cuff and after inflating cuff above normal range, allows to deflate, listening for and noting the levels on the scale at which the first pulse sound occurs (systolic pressure) and ceases (diastolic pressure), in order to take and record the patient's blood pressure.	C
3) Observes, palpates (touches, feels, applies pressure with fingers) area of patient's skin noticed as suspicious during general observation, noting warmth, coldness, texture, turgor, elasticity and lesions (if present) in order to determine and locate the presence of abnormal conditions (pathologies) which physician may or may not wish to check.	A
4) Observes, palpates entire heart area, noting maximum point of impulse; percusses chest areas, checking resonances, and draws on knowledge of heart anatomy, criteria for judging abnormalities in order to detect and record abnormality as to position, size (enlargement) and resonances which may require further examination by the physician.	A

	Type Asst. Who Could Perform the Task
5) Examines, observes, listens to heart sounds (using stethoscope) over each valvular area, over anterior/posterior chest, and drawing on knowledge of criteria for normal/abnormal heart beat, evaluates sounds as to rhythm, rate, quality, intensity, in order to detect and locate abnormal sounds, presence of murmurs (and transmission) and bruits.	A
6) Observes, palpates, percusses anterior, posterior areas of the chest, listening to lung sounds (moving stethoscope over all chest areas) and refers to criteria for detecting abnormal sounds (rales, voice transmission, resonances, etc.) in order to detect, locate and record the presence of unusual/abnormal sounds.	A
7) Observes, palpates, percusses patient's abdominal region, elicits areas of tenderness and notes patient reactions, searching for (in each quadrant) muscle rigidity, masses, cysts, fluids, and evidence of infection, drawing on knowledge of abdominal anatomy, in order to detect and locate the presence of abnormal conditions.	A
8) Reviews, compiles, and writes up notes from all aspects of the physical examination, summarizing all findings, emphasizing, with special reference, examination results requiring immediate consideration by the physician, in order that the physician can become informed of, and set priorities for, diagnosing and treating the patient's illness/condition.	A

General Note:

The set of tasks here (performing and recording findings on the physical examination) are typical in format and level of complexity required of others in the series. The other tasks would be stated and analyzed in much the same way, allowing for changes in specific content.

It will be noted further that tasks with low functional levels, such as taking blood pressure (task #2 in this set) or taking temperatures, are highly standardized. This is an indication that the task can be delegated (as they almost always are) down to other workers (aides, etc.).

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

'HAT MUST GET DONE: Note visible indications of ill health, disease

Type Assistant Who Could Perform the Task - B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
3	3	85	1b	10	1a	5	3	1	2

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Observes patient prior to and throughout the physical exam, scanning body regions, patient's general appearance, in order to detect visible clues, signs, markings etc. indicating abnormalities, ill health.	Qualitative * Observation is careful and complete and is carried out with tact (not giving offense to patient). * Observations yield data useful to carrying out the physical exam. Quantitative * All observable indications of abnormalities are described and accounted for in report to physician. * Less than 2% of reported information is incomplete, inaccurate, or useless to physician in diagnosing physical condition.	Functional Skills * How to observe patients, note visible indications which are to be followed up in the physician's examination. Manuals/instructions on observation techniques. * How to observe patients without giving them offense or cause for alarm. * How to follow through; get patient to explain background on extraordinary lacerations, bruises, lumps, etc. (as best he can). Specific Content Skills * Physician's methods, instructions for observing patients, reporting, following up on findings.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

WHAT MUST GET DONE: Take and record blood pressure
Type Assistant Who Could Perform Task - C

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
1	2	65	2	15	1a	20	2	2	2

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Wraps cuff around patient's arm (arms and/or leg) adjusting tubes and valve of sphygmomanometer, positions stethoscope under cuff and, after inflating cuff above normal range, allows to deflate, listening for and noting the levels on the scale at which the first pulse sound occurs (systolic pressure) and ceases (diastolic pressure) in order to take and record the patient's blood pressure.	Qualitative * The procedure is carried out in a thorough and complete manner and takes a brief period of time. Quantitative * % of errors in blood pressure over the course of a period of time set by the physician and * % of complaints from patients regarding worker's attitude, manner.	Functional Skills * How to situate patient for measurement tests. * How to arrange equipment (attach to patient) in an expeditious manner. * How to give instructions to patient to gain cooperation. Specific Content Skills * How to set up and use sphygmomanometer.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Determine normal, abnormal condition of skin
Type Assistant Who Could Perform the Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
5	4	60	3c	30	1b	10	5	3	5

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Observes, palpates(touches, feels, applies pressure with fingers) area of patient's skin noticed as suspicious during observations, noting warmth, coldness, texture, turgor, elasticity and lesions if present, in order to determine and locate the presence of abnormal conditions (pathologies) which the physician may wish to check.	Qualitative * The skin observation/examination is conducted in a thorough, complete and reasonably quick manner. * The evaluation is accurate and concise. * The patient understands instructions and cooperates with the physician's assistant. Quantitative * Less than 5% of the skin condition evaluations over a period of time set by the physician are incorrect, incomplete, and not useful to the physician in diagnosing patient's conditions. * Less than 1% of patients over a time period set by physician complain of physician's assistant's manner (rude, brusque, etc.).	Functional Skills * Knowledge of normal conditions of skin. * Criteria for determining presence of abnormalities, diseases. * Ability to detect, describe rashes, abnormal skin pigmentation, etc. accurately. Specific Content Skills * How to apply criteria for determining abnormality/pathology of skin to specific patient. * How to relate patient's history to present skin condition in reporting to physician.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Detect and record heart abnormality

Type Assistant Who Could Perform the Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
5	4	70	3c	10	1b	20	5	4	5

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Observes, palpates entire heart area, noting maximum point of impulse; percusses chest areas, checking resonances, and draws on knowledge of heart anatomy, criteria for judging abnormalities in order to detect and record abnormality as to position, size (enlargement) and resonances which may require further examination by the physician.	Qualitative * Observation, palpation and percussion are complete and thorough, and take up a reasonable amount of time. * All indications of abnormalities are accurately noted. * Patient is cooperative, takes instructions from the physician's assistant throughout. Quantitative * Less than 5% of data reported over a period of time set by the physician is inadequate (i.e. incorrect, incomplete) and useless to the physician for his further examination and diagnosis of heart problem(s). * Less that 1% of patients complain, over a period of time set by physicians, as to physician's assistant's manner, style (e.g. rudeness, brusqueness, etc.).	Functional Skills * Knowledge of principles of cardiology (anatomy and physiology of the heart). * Knowledge of criteria for detecting, judging the presence of abnormality (in heart size, position, etc.). * Ability to describe and report finding (i.e., heart abnormality in re size, position, resonances). * Ability to gain cooperation of patient in examination. Specific Content * How to observe, palpate, percuss patient's heart area. * How to apply criteria (above) to individual patients. * How to cite important facts from patients medical history to physical examination results (in re heart) for physician's review.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Detect, record heart abnormality (murmurs)
Type Assistant Who Could Perform the Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
5	4	70	3c	10	1b	20	5	4	5

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Examines, observes, listens to heart sounds (using stethoscope) over each valvular area over anterior/posterior chest, and drawing on knowledge of criteria for normal/abnormal heart beat, evaluate sounds as to rhythm, rate, quality, intensity in order to detect and locate abnormal sounds, presence of murmurs (and transmission) and bruits.	Qualitative * Examination is conducted in a thorough complete manner. * All indications of abnormality are detected, located, and described accurately. * Patient is cooperative, takes instructions from physician's assistant throughout examination. Quantitative * Less than 5% of reported data, over a period of time set by physician, of abnormal heart sounds-murmurs, transmission proves to be incorrect, incomplete, and useless in helping physician zero in on heart problems. * Less than 1% of patients complain about physician's assistant's manner, attitude over a period of time set by physician. * Task completed in reasonable time period.	Functional Skills * Knowledge of principles of cardiology (anatomy and physiology of the heart). * Ability to understand, apply the criteria for detecting presence of murmurs, abnormal conditions. * Steps, methods, equipment used in heart examination. * Ability to describe and report findings concisely and accurately. Specific Content * How to recognize, locate specific abnormal findings. * How to report findings according to specific format of physician.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Detect, record abnormality of lung sounds
Type Assistant Who Could Perform Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
5	4	70	3c	10	1b	20	5	4	5

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Observes, palpates, percusses patient's anterior, posterior areas of the chest, listening to lungs sounds (moving stethoscope over all chest areas) and refers to criteria for detecting abnormal sounds (rales, voice transmission, resonances, etc.) in order to detect, locate and record the presence of unusual/ abnormal sounds.	Qualitative * The exam is conducted in a thorough and complete manner. * Findings are accurate and fully reported. * Patients cooperate with physician's assistant. Quantitative * Less than 5% of reported data on lung condition of patient, over a period of time set by physician, is inaccurate, incomplete and useless for physician's followup activity, examination. * Less than 1% of all patients complain about physician's assistant's manner (rudeness/etc) * Task completed in a reasonable time period.	Functional Skills * Knowledge of respiratory system, anatomy and physiology of lungs. * Knowledge of abnormal conditions (general) occuring in lungs. * Knowledge of criteria for detecting abnormal sounds, conditions in lungs. * Ability to describe and report findings concisely and accurately. Specific Content * How to recognize, locate and describe abnormal lung sound conditions. * Examination, reporting procedures for specific physician.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Detect, record abnormal abdominal conditions

Type Assistant Who Could Perform Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
5	4	70	3c	10	1b	20	5	4	5

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Observes, palpates, percusses patient's abdominal region, elicits areas of tenderness and notes patient reactions, searching for (in each quadrant) muscle rigidity, masses, cysts, fluids and evidence of infection, drawing on knowledge of abdominal anatomy, in order to detect and locate the presence of abnormal conditions.	Qualitative * The abdominal examination is complete, thorough and carefully carried out in a reasonable time. * The findings are accurate and concisely reported. * The physician's assistant's manner is gentle, can elicit patient cooperation. Quantitative * Less than 5% of all reported data over a specified time period is inaccurate, incomplete, misleading, or useless to the physician. * Less than 1% of patients over a specific time complain about physician's assistant's manner, style.	Functional Skills * Principles of abdominal anatomy, physiology. * Methods, techniques for carrying out abdominal examination. * Criteria for detecting presence of abnormal conditions. * Ability to describe and report findings accurately. Specific Content * Patient's medical history (as guide to physical examination). * Physician's instructions for carrying out examination.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

'HAT MUST GET DONE: Reporting findings of physical examination to physician

Type Assistant Who Could Perform the Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
3	4	80	1b	10	1A	10	5	5	4

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Review, compile and write up notes from all aspects of the physical examination, summarizing all findings, emphasizing, with special reference, examination results requiring immediate consideration by the physician in order that the physician can become informed of and set priorities for diagnosing and treating the patient's illness/condition.	Qualitative * The report is accurate, clearly stated, complete and useful to the physician. * It is legible and follows physician's format. Quantitative * Less than 5% of all data on physical examination reports are inaccurate, incomplete or useless to the supervising, employing physician. * Less than 5% of all data on physical examination is reported improperly (does not follow physician's format) or illegibly.	Functional Skills * How to review, summarize data/emphasizing, calling attention to key points. * How to describe patient's abnormalities/pathology in a concise and clear way. Specific Content * Proper descriptive vocabulary of abnormal conditions. * Physician's required reporting format.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

TASK STATEMENTS

Subsystem I - Basic Training Program

At the end of training, the physician's assistant will be able to implement the following objective:

Objective (development of training objective #7, Subsystem I, page 16)

Perform routine laboratory tests (blood, urine, etc.) and procedures and/or schedule them to be done by others, within the time limit set by the physician.

Sample Task Statements (performed by the physician's assistant) which contribute toward implementing the stated objective:

	Type Asst. Who Could Perform The Task
1) Draws blood sample, using standard pipettes and counting chambers, placing measured samples (red corpuscles and white cells) on proper counting slide, calculating total cells and noting any abnormal morphology of cells, using microscope, in order to obtain the count of red and white blood cells.	B
2) Smears drop of blood on slide, applying standard stain to smear, and places under microscope, in order to obtain a differential count of white cells, noting any abnormality of morphology.	A
3) Contacts (telephone or personal) proper hospital personnel, informing them of physician's prescription and treatment plan for a specific patient, in order to arrange for and schedule special tests, treatment facilities needed for treating the patient.	B or C
4) Punctures newborn's heel with heel stick placing and applying filter paper over puncture until blood sample area (circle in filter paper) is saturated in order to prepare blood sample for P.K.U. determination.	C
5) Reviews printouts of automated data gathering/interpretation instruments (auto analyzer, etc.) checking these against the patient's history, symptoms, physical and other findings, in order to detect and record inconsistencies in the reported data.	A

General Note:

The set of tasks here (blood test) are typical in format and level of complexity required of any others in the series (urine tests, occult blood in feces, etc.). These other tasks could be stated and analyzed in the same way. Only the specific content (method, equipment) would change.

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Determine blood count
Type Assistant Who Could Perform the Task - B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
2	3	45	1a	10	1b	45	3	3	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Draws blood sample, using standard pipettes and counting chambers, placing measured samples (red corpuscles and white cells) on proper slide, calculating total cells and noting any abnormal morphology or cells, using microscope, in order to obtain the count of red corpuscles and white cells.	Qualitative * The sample is taken carefully (not bothering or distressing patient). * The procedure is followed in a precise manner. * Notations are accurate. * Test completed within reasonable time period. Quantitative * The count meets the accuracy standards set by the physician. * No other sample need be taken - due to breakage or mishandling of equipment. * Abnormality in morphology of cells is described and reported to physician.	Functional Skills * Knowledge of blood testing procedures and use of basic lab equipment. * Knowledge of blood cell morphology. Criteria for determining presence of abnormality. * How to sum up and report lab findings accurately, concisely. Specific Content Skills * Use of blood testing equipment. * Type of blood sample to draw (use of pipettes, counting chambers, etc.). * How to take count of red corpuscles and white cells and report results according to physician's requirements. * Recognize and report abnormal morphology of red corpuscles and white cells in sample.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Differential Count of white cells

Type Assistant Who Could Perform the Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
3	4	45	1a	10	1b	45	3	3	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Smears drop of blood on slide, applying standard stain to smear, and places under microscope, in order to obtain a differential count of white cells, noting any abnormality of morphology.	Qualitative * The procedure is carried out in a careful and precise manner. Notations are made within the prescribed range of accuracy (i.e., by the supervising physician). * Count obtained within reasonable time period. Quantitative * No slides, lab equipment are broken. * All reported data falls within the tolerance range set by the physician. * All abnormal morphology of blood cells is reported and described. All reports are accurate and useful to the physician.	Functional Skills * Knowledge of blood testing procedures/lab procedures, use of basic lab equipment. * How to take differential blood counts. * Criteria for determining normal/abnormal cell morphology. * How to report findings of lab tests. Specific Content Skills * Use of stains/microscope, etc. * How to take a differential count of white cells and report results within the range specified by the physician. * Recognize/report morpological abnormalities of white cells in the sample.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Schedule tests/treatment facilities for patients.

Type Assistant Who Could Perform the Task - B or C

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
2	2	60	2	35	1a	5	2	2	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Contacts (telephone or personal) proper hospital personnel, informing them of physician's prescription and treatment plan for a specific patient in order to arrange for and schedule special tests, treatment facilities needed for treating the patient.	Qualitative * The physician's orders are relayed completely, accurately. * All schedules are set according to instructions. * The physician's assistant speaks clearly, is understood by others. Quantitative * Lab test results are completed and reported back within the time period set by the physician (i.e., ready for his use, when he needs the data). * Less than 1% of hospital, lab personnel complain over a period of thme that the physician's assistant is brusque, speaks unclearly, etc.	Functional Skills * Knowledge of physician's procedures and schedules. * Knowledge of hospital admission procedures. Specific Content Skills * Terminology for requesting specific procedures. * Treatment plan for scheduling tests (scheduling procedures).

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Obtain newborn's blood sample for P.K.U. determination

Type Assistant Who Could Perform the Task - C

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
1	2	50	1a	5	1a	45	2	2	2

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Punctures newborn's heel with heel stick placing and applying filter paper over puncture until blood sample area (circle in filter paper) is saturated in order to prepare blood sample for P.K.U. determination.	Qualitative * Blood sample is adequate for test requirements * The physician's assistant is careful in carrying out blood sampling procedures. Quantitative * No harmful medical effects to the newborn due to the physician's assistant's neglect in carrying out blood sampling procedures.	Functional Skills * Blood sampling techniques in regard to newborns. Specific Content Skills * Use of heel stick,etc.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Checking for inconsistencies between physician's findings and auto analyzer report.

Type Assistant Who Could Perform the Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
4	4	80	1a	10	2b	10	5	3	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Reviews printouts of automated data gathering interpretation instruments (auto analyzer, etc.) checking these against the patient's history, symptoms, physical, and other findings, in order to detect and record inconsistencies in the reported data.	Qualitative * The review is complete and accurate; all inconsistencies, if any, are reported. * The physician's assistant is careful and detailed in checking the data. Quantitative * Over period of time set by physician, all inconsistencies not recognized between data reported by auto analyzer and interview material recorded in patient's record should be less than 5%.	Functional Skills * How to review data from several sources. * How to scan in order to detect inconsistencies. * Ability to summarize, record and report information. * How to operate data recording instruments (i.e., auto analyzer). Specific Content Skills * Patient's history and physical exam. * Printouts from auto analyzer. * Physician's format for reporting.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

TASK STATEMENTS

Subsystem I - Basic Training Program

At the end of training, the physician's assistant will be able to implement the following objective:

Objective (development of Objective #5, Subsystem I on page 15)

Over a period of time set by the physician, takes and records the patient's social, family and medical history for use by the physician in his working diagnosis.

Sample Task Statements (tasks which are performed by the physician's assistant) which contribute toward implementing the stated objective:

	Type Asst. Who Could Perform the Task
1) Converses with patient, exchanging pleasantries, amenities in order to welcome him to the physician's office and put him at ease for subsequent interview, physical examination.	B or C
2) Converses with patient, asking questions, listening to and recording responses on social data (age, sex, education, employment, marital status, income, etc.), following physician's interview format, in order to establish a written record of the patient's social history.	B or C
3) Converses with patient, questioning him, listening to and recording responses on past medical history (childhood diseases, previous adult diseases, operations, accidents, etc.) using physician's interview format, if required, and encouraging and helping the patient recollect and make full responses - following through in detail on all responses indicating previous illnesses, etc., in order to establish a written record of the patient's medical history.	B
4) Reviews and writes up, in summary form, information obtained from the patient history interview, highlighting/emphasizing critical facts - according to the norms and reporting format set by the physician, in order to provide him with a record of the patient's family, social and medical history.	B
5) Reviews (reads) patient's self history/self report form on personal, social, medical background - focusing on critical or unclear responses, i.e., a recent major illness, questions patient for more detail and clarification in order to obtain relevant and complete patient data.	B

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Greet patient, prepare him for interview and physical examination.

Type Assistant Who Could Perform the Task - B or C

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
2	2	10	2	85	1A	5	2	1	2

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Converses with patient, exchanging pleasantries, amenities, in order to welcome him to the physician's office and put him at ease for subsequent interview and physical examination.	Qualitative Exchange is completed in a polite, articulate and to-the-point manner. Quantitative * Not more than 1% of patients per week complain about worker's manner (rudeness, brusqueness). * Not more than 1% of patients per week prove to be non-cooperative/hesitant, etc. in interview and physical examination, due to worker's inability to relate to patients.	Functional Skills * Basic interviewing skills: - how to convey information; - how to deal with reticent & hostile patients; - how to show courtesy to others Specific Content Skills * Knowledge of physician's office procedures

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Take and record social history

Type Assistant Who Could Perform the Task - B or C

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
2	2	55	2	40	1A	5	2	2	2

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Converses with patient, asking questions, listening to and recording responses on social data (age, sex, education, employment, marital status, income, etc.), following physician's interview format, in order to establish a written record of the patient's social history.	Qualitative * All required data is recorded accurately within a reasonable period of time. * Interview is conducted in a polite, articulate manner. Quantitative * Less than 5% of recorded data, over a period of time set by the physician, is inaccurate, incomplete, useless. * Less than 1% of patients (over a period of time set by the physician) complain about the physician's assistant's manner in dealing with them (i.e., rude, brusque, etc.).	Functional Skills * Basic interviewing skills - how to ask questions, take notes, record data on form - how to rephrase, repeat questions to get accurate information * Interpersonal relations - how to get along with and elicit cooperation from patients - how to show courtesy to patients Specific Content Skills * Knowledge, familiarity with topics to be covered and all questions to be asked. * Physician's format for recording and reporting information. * Ability to solve problems in recording/reporting social histories.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Take and record medical history (assist patient in recalling in order to complete full medical history). Type Asst. Who Could Perform Task - B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
3	3	55	3A	40	1A	5	3	2	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Converses with patient, questioning him, listening to and recording responses on past medical history (childhood diseases, previous adult diseases, operations, accidents, etc.) using physician's interview format, if required, encouraging and helping the patient recollect and make full responses - following through in detail on all responses indicating previous illnesses, etc., in order to establish a written record of the patient's medical history.	Qualitative * All required data on medical history is recorded accurately. The medical history is complete and taken in a reasonable period of time. * The worker is polite, clear and helpful to the patient in the interview. Quantitative * Less than 5% of recorded data over a time period set by the physician (number of days, week) is inaccurate, incomplete, useless or requires further questioning of patient. * Less than 1% of patients complain about the physician's assistant's manner in trying to obtain medical history.	Functional Skills * Communication skills - how to question patients, record responses; - how to ask questions which will help patient recall facts (about his medical history); - how to follow through, press for details in patient's responses, without giving offense. * Interpersonal skills - how to get along with patients (esp. reticent or hostile patients); - how to understand patient's difficulties in expressing personal information to others; - how to show courtesy, warmth to patients. Specific Content Skills * All headings, topics, and questions that make up the format, questionnaire of the medical history. * Patient's previous records (if the patient is not new to the physician). * Ability to solve problems in recording/ reporting medical histories.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Written record of patient's family, social and medical history.
Type Assistant Who Could Perform Task - B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
3	3	80	1A	10	1A	10	3	2	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Reviews and writes up, in summary form, information obtained from the patient history interview, highlighting/emphasizing critical facts - according to the norms and reporting format set by the physician in order to provide him with a record of the patient's family, social and medical history.	Qualitative * The report is concise, contains all information required by the physician and is legible. Quantitative * Less than 5% of reported data over a period of time set by the physician is inaccurate, incomplete, useless, or illegible.	Functional Skills * Communication skills - how to review and classify information; - how to sort out non-essential information; - how to emphasize key facts in a report; - basic reporting skills, how to follow report formats; Specific Content Skills * How to follow physician's reporting format. * Patient's previous record (if not new to the physician). * Practice problems in reporting.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Clarification of patient self history (if utilized by the Physician)
Type Assistant Who Could Perform Task - B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
3	3	50	1a	45	1a	5	3	2	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Reviews (reads) the patient's self history/self report form on personal, social, medical background-focusing on critical or unclear responses, e.g., a recent major illness, questions patient for more detail and clarification in order to obtain relevant and complete patient data.	Qualitative * The record is clarified, data obtained is helpful to physician. * The physician's assistant is careful, precise in following up details. Quantitative * Less than 5% of the data, over period of time set by the physician, is insignificant for use in working diagnosis. * Less than 1% of patients complain over a period of time in regard to physician's assistant's manner, e.g., brusqueness, rudeness, etc.	Functional Skills * How to review a patient self history, scan for significant facts and responses needing elaboration or clarification. * How to question patients in formal and detailed manner without alarming them or appearing authoritarian. * How to summarize and highlight complete data for the physician's review. Specific Content Skills * The patient's self report. * The physician's procedure format for interviewing patient.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

TASK STATEMENTS

Subsystem II - Specialty Training Program

At the end of training, the physician's assistant will be able to implement the following objective.

Objective (development of training objective #7, Subsystem II on page 18)

Assist the physician in carrying out treatment and therapy under the direction and time frames set by the physician.

Sample Task Statements (tasks which are performed by the physician's assistant) which contribute toward implementing the stated objective.

	Type Asst. Who Could Perform the Task
1) Administers (gives) to patient prescribed medications (pills, injections, etc.), instructing and helping patient carry out steps, procedures of the treatment plan in accordance with the directions of the physician, or follows stated orders for routine treatment, in order to implement treatment plan.	A or B
2) Converses with patient and/or patient's family members, explaining and interpreting physician's instructions, prescriptions and procedures for patient care, encouraging and answering questions, in order that the patient and/or family understand the physician's orders, instructions, prescribed steps to be followed in carrying out the treatment plan.	A
3) Visits patients in their homes, or in hospital, checking patient's condition by observation, questions (or any aspect of the physical examination, as needed) following instructions of physician, if specified, in order to report to the physician any changes in the patient's condition.	A

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: To implement plan of the physician, to carry out specific instructions in administering treatment.

Type Assistant Who Could Perform Task - A or B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
3	4	35	4C	40	2a	25	4	4	4

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Administers (gives) to patient prescribed medications (pills, injections, etc.) instructing and helping patient carry out steps, procedures of the treatment plan in accordance with the directions of the physician or follows standing orders for routine treatment in order to implement treatment plan.	Qualitative * The physician's assistant shows care, concern in dealing with patient. * All prescribed pills, etc. are taken by patient according to directions. Quantitative * Less than 1% of patients complain or manifest dissatisfaction with worker's style, etc. * No patient receives incorrect, wrong prescription.	Functional Skills * How to administer medicine, give shots. * How to give support, hold, help patient while taking medication. * How to sympathize with, get along with others. * Knowledge of basic principles, techniques of therapy procedures. Specific Content Skills * Physician's prescription, instructions. * Steps of treatment plan. * Chart, indicating patient's records.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Interpret physician's prescription/instructions to patient, patient's family

Type Assistant Who Could Perform Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
4	3	50	3b	45	1A	5	5	3	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Converse with patient and/or patient's family members, explaining and interpreting physician's instructions, prescriptions and procedures for patient care, encouraging and answering questions, in order that the patient and/or family understand the physicians orders, instructions, prescribed steps to be followed in carrying out the treatment plan.	Qualitative * The conversation is clear, understandable to patient, family members. * The physician's assistant's manner is supportive, considerate, professional, tactful. Quantitative * Follow up visits indicate that instructions etc. are being carried out according to physician's directions. * Less than 1% of patients over a period of time set by physician complain that physician's assistant's explanation was inadequate.	Functional Skills * Ability to convey information to others clearly, concisely. * Ability to interpret, explain instructions accurately. * Ability to sympathize with, get along well with patients. * Ability to explain medical facts, terms in everyday layman's language. Specific Content Skills * Knowledge of specific instructions from physicians for a patient. * Knowledge of patient's medical and family record.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Check patient's condition (home/hospital)
Type Assistant Who Could Perform Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
4	4	40	2	50	1b	10	3	3	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Visits patients in their homes, or in hospital, checking patient's condition by observation, questions (or any aspect of the physical examination, as needed) following instructions of physician, if specified in order to report to the physician any changes in the patient's condition.	Qualitative * The visits, or rounds, are conducted in a careful manner. All changes are noted. All checks carried out. Quantitative * Less than 5% of all reported data from visits, rounds, over period of time set by physician is inaccurate, incomplete, misleading or useless. * Less than 1% of patients visited, over specified time, complain about physician's assistant's manner (i.e., brusque, unconcerned).	Functional Skills * How to observe, check patient without causing him distress, alarm. * How to question patient, check observable conditions against records, to detect changes. * How to follow through and gain a more indepth check with partial physical examination, if needed. Specific Content Skills * Knowledge of patient's general condition, records. * Physician's instructions (what to check for, etc.).

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

TASK STATEMENTS

Subsystem III - Supervised Clinical Experience

At the end of training, the physician's assistant will be able to implement the following objective.

Objective (development of training objective #1a, #1b, #1c, Subsystem III on page 19,20)

Perform emergency treatment for all persons in or entering clinic who require it.

Sample Task Statements (tasks performed by the physician's assistant):

	Type Asst. Who Could Perform The Task
1) Makes immediate decisions as to priority and type of treatment for patients in emergency situations, taking into consideration degree of seriousness and urgency of each case, in order to initiate treatment procedures and disposition for each case.	A
2) Gives/administers cardio-respiratory resuscitation to patient, using closed cardiac massage (a defibrillator may be necessary) and/or mouth-to-mouth breathing, judging whether both must be done simultaneously or only one system is involved in order to restore heart and respiratory functions.	A or B
3) Places tourniquet at appropriate location or applies digital pressure in area where tourniquets can't be used, until bleeders are controlled by pressure dressing or tied off in order to stop bleeding.	B

General Note:

There is, of course, a range of emergency measures that require different treatment, e.g., treating children who have swallowed poison, etc. The tasks here illustrate the format level of complexity regarding decision making, skill, use of method, etc. For tasks treating emergencies of a different nature, the specific content of the illustrations would change.

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Perform triage

Type Assistant Who Could Perform the Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
6	5	45	4c	50	1b	5	5	3	5

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Makes immediate decisions as to priority and type of treatment for patients in emergency situations, taking into consideration degree of seriousness and urgency of each case, in order to initiate treatment procedures and disposition for each case.	Qualitative * The decision is made immediately, based on accurate, comprehensive interpretation of events, patient's situation and resources. * The physician's assistant is perceptive, confident (decisive) and can act/make judgments quickly. Quantitative * No negative changes in the patient's condition due to poor (incomplete, inaccurate) decisions. * Less than 5% of hospital workers over the emergency period do not understand physician's assistant's directives due to unclarity, etc.	Functional Skills * How to execute triage. * Decision making - how to review, analyze/interpret data - make decisions requiring management of many variables. * Ability to set priorities in assigning treatment to and disposition of patients with variable serious conditions, injuries. * How to coordinate workers in carrying out triage procedures. Specific Content Skills * Each patient's situation, needs. * Hospital resources for handling emergency conditions, problems. * Ability to be able to properly utilize all emergency equipment. * Intravenous fluids and/or blood.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Emergency treatment: restore heart and respiratory functions

Type Assistant Who Could Perform the Task - A or B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
5	4	20	4b	50	2a	30	4	3	4

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Gives/administers cardio-respiratory resuscitation to patient, using closed cardiac massage (a defibrillator may be necessary) and/or mouth-to-mouth breathing, judging whether both must be done simultaneously or only one system is involved, in order to restore heart and respiratory functions.	Qualitative * Treatment is carried out immediately. * The physician's assistant is decisive, acts immediately. Quantitative * In all emergency cases, patient's condition does not worsen due to delay, neglect, or improper procedures on the part of the physician's assistant.	Functional Skills * Ability to make decisions rapidly, in an emergency situation. * Knowledge of all emergency treatment methods, equipment for cardio-respiratory collapse. * How to cooperate with others in administering emergency treatment. Specific Content Skills * Knowledge of specific (cardio-respiratory) problems to be treated. * How to use defibrillator. * How to treat patient with appropriate stimulant, if indicated.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

/HAT MUST GET DONE: Emergency Treatment : stop bleeding
Type Assistant Who Could Perform the Task - B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
5	4	20	4b	50	2a	30	4	3	4

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Places a tourniquet at appropriate location or applies digital pressure in area where tourniquets can't be used, until bleeders are controlled by pressure dressing or tied off in order to stop bleeding.	Qualitative * The treatment is complete, correct and executed rapidly and carefully. * The physician's assistant is perceptive, careful, decisive. Quantitative * In all cases, the bleeding does not continue due to any delay, neglect, or improper procedures of the physician's assistant.	Functional Skills * Knowledge/application of treatment principles on how to stop bleeding. * How to develop treatment options, select most feasible, execute under emergency conditions. * Instruments/methods, procedures for stopping bleeding (e.g., where/how to place tourniquets, pressure dressings. tying bleeders). Specific Content Skills * Condition of the patient under emergency care (how to treat specific bleeding areas). * Location, use of equipment in the emergency room.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

TASK STATEMENTS

Subsystem III - Supervised Clinical Experience

At the end of training, the physician's assistant will be able to implement the following objective.

Objective (developed from training objective # lc, Subsystem III, page 20)

Provide X number of hours per week of administrative office management services for the physician.

Sample Task Statements (tasks performed by the physician's assistant) which contribute toward implementing the stated objective:

	Type Asst. Who Could Perform The Task
1) Reviews patient's record and case analysis, selecting and filling out information prescribed by insurance forms (insurance, workman's compensation, Medicare, etc.) ready for physician's approval and signature, in order to expedite payments/ claims, processes and procedures.	A
2) Converses with nurse's aides, office assistants, describing, giving explanations and demonstrations for taking temperature, blood pressure, E.K.G.'s and routine laboratory work and other office procedures (simple reporting, message taking, appointment scheduling), in order that these new workers can perform these basic tasks and relate/participate in team approach to patient care.	A or B

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Filling out medical portions of forms
Type Assistant Who Could Perform the Task - A

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
5	4	80	1a	10	1a	10	3	4	3

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Reviews patient's record and case analysis, selecting and filling out information prescribed by insurance forms and fills out forms (insurance, workman's compensation, Medicare, etc.) readying for physician's approval and signature, in order to expedite payments/claims, processes and procedures.	Qualitative * The forms are accurately and completely filled out and with reasonable speed. * The physician's assistant writes legibly.	Functional Skills * How to interpret instructions, select specific data from several sources in regard to patient and insurance proceedings. * Ability to fill out insurance forms. Specific Content Skills * How to locate, work with files on specific patient.. * Knowledge of patient's insurance policies and required medical report section.

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SAMPLE TASK WHICH CONTRIBUTES TOWARD IMPLEMENTATION OF THE OBJECTIVE

HAT MUST GET DONE: Training other workers for doing office procedures.

Type Assistant Who Could Perform the Task - A or B

INSTR	WORKER FUNCTIONS						GEN EDUCATIONAL DEVELOPMENT		
	Data	%	People	%	Things	%	Reas	Math	Lang
4	4	30	4b	50	2b	20	4	3	4

TASK STATEMENTS	PERFORMANCE STANDARDS	TRAINING CONTENT
Converses with nurse's aides, office assistants, describing, giving explanations and demonstrations for taking temperature, blood pressure, E.K.G.'s and routine lab work and other office procedures (simple reporting, message taking, appointment scheduling), in order that these new workers can perform these basic tasks and relate/participate in team approach to patient care.	Qualitative * Instructions are clear, complete and accurate. * The physician's assistant's instructing methods are understandable and helpful to the students/new employees. * Physician's assistant's manner is outgoing, reflects interest in students and/or new employees. Quantitative * Within X lessons, new employees are able to perform the indicated tasks. * Less than 5% of employees complain, over the instructional period, that the physician's assistant is not clear in explanations, is condescending, etc.	Functional Skills * Ability to communicate information and instruct others, answer questions, give demonstration of equipment. * How to involve students in demonstration. * How to instruct in a relaxed, informal way. * How to evaluate student performance. Specific Content Skills * Temperature, blood pressure, E.K.G., lab and office procedures, requirements in specific physician's office. * Relation of these tasks to total patient care (e.g., contribution of team members).

NOTE: THIS IS ONE OF MANY TASKS INVOLVED IN ACCOMPLISHING THE OBJECTIVE

SUMMARY OF JOB LEVEL FOR THREE TYPES OF WORKERS WHO ASSIST PHYSICIANS

The position description is based on summarized task statements that make it up. Since all the tasks are rated against an ordinal scale, the overall position can be arrived at by noting the highest Instruction, Function, and General Educational Development levels for those tasks for which each type assistant is responsible; thus, the general level for the three types of assistants is the highest required for tasks for which they are responsible.

Definitions for Each Type Assistant *

1) Type A - Physician's Assistant or Associate

Type A within this definition of an assistant to the physician is capable of approaching the patient, collecting historical and physical data, organizing the data, and presenting it in such a way that the physician can visualize the medical problem and determine the next appropriate diagnostic or therapeutic step. He is also capable of assisting the physician by performing diagnostic and therapeutic procedures and coordinating the role of other more technical assistants. It is recognized that he functions under the general supervision and responsibility of the physician, though he might, under special circumstances and under defined rules, operate away from the immediate surveillance of the physician. To properly perform at this level, the assistant must possess enough knowledge of medicine to permit a degree of interpretation of findings and a degree of independent action within these defined rules and circumstances.

2) Type B - Special Technical Physician's Assistant or Technician
(Intermediate Level Assistant)

Type B is characterized by a more limited area of knowledge and skill, and a more limited ability for integration and interpretation of findings. He is, as a result, less capable of independent action, but within his area of skill and knowledge he may be equal in ability to the Type A assistant or to the physician himself. Assistants at this level may be trained in a particular specialty without prior exposure to more general areas of medical practice, or may be trained in highly technical skills. i.e., orthopedic assistant is not trained to do histories or complete physical examinations.

3) Type C - Office Assistant, Aide, etc. (Lowest Level Assistant)

Type C is characterized by training which enables him to perform a single defined task or series of such tasks for the physician. These tasks generally require no judgmental decisions and are under direct supervision.

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* Taken from the A.A.M.C. Task Force Report on Physician's Assistants (Appendix III)

Highest Level of Instruction (Discretionary Responsibilities) Required by Each of the Three Types of Physician's Assistants

1) Type A - Physician's Assistant or Associate - Level 6

Various possible procedures are available to meet a patient's immediate needs. The assistant, in the absence of the physician, must consider the various possible procedures and evaluate them in regard to the immediate procedural demand. This usually requires his creative use of theory well beyond referring to standard sources (i.e., handling an immediate critical emergency, first aid, and triage). The situation is such that a physician is simply not available and that any delay will jeopardize the patient's condition and/or life.

2) Type B - Special Technical Physician's Assistant or Technician - Level 5

The assistant's functions are specified in his assignments, but he must work out his own ways of getting the job done, including selection of equipment he uses and sequencing of procedures. He may carry out some of the tasks himself or refer the task to others (i.e., conducts a detailed physical examination, utilizing various instruments to complete the examination, perform or schedule specified routine laboratory procedures - bloods, urines, etc. - and uses or schedules specified equipment such as an electrocardiography).

In addition, the worker is expected to know and employ some theory so that he understands the whys and wherefores of the various options that are available for dealing with a patient who needs more than routine procedures (i.e., ordering (reduces discretion), special laboratory procedures and/or special diagnostic procedures - G.I. series, organ scans, special blood chemistries, etc.).

3) Type C - Office Assistant or Aide, etc. - Level 2

The assistant's instructions are limited and specified but he has some leeway in the procedures or methods he can use to get the job done (i.e., obtain patient's chief complaints, re: his illness and/or completion of a history and symptom check sheet). The assistant has some leeway in sequencing his questioning and recording.

Highest Functional Level for each Type of Assistant

DATA

1) Type A - Physician's Assistant or Associate - Level 5

Coordinating

Decides time, place, and sequence of operations of a process for treatment of a patient, system, and/or need for revision of goals, policies or procedures, on the basis of analysis of data and of performance review of treatment objectives and requirements. Includes execution of decisions and/or reporting on events.

2) Type B - Special Technical Physician's Assistant or Technician - Level 4

Analyzing

Examines and evaluates data about PEOPLE (patients), DATA (reports on, records of, patients) and THINGS (e.g., medical instruments, equipment) with reference to the criteria, standards and/or requirements of a particular discipline (see course titles for physician's assistants) art or technique to determine interaction effects (consequences) and to consider alternatives. The physician's assistant is 'Analyzing' when he performs tasks requiring constant reference to his background training in Anatomy, Physiology, etc. and when he is applying specialized techniques required in task performance.

3) Type C - Office Assistant or Aide, etc. - Level 2

Copying

Transcribes, enters, and/or posts patient data and information. Follows prescribed plan in a) recording information on charts, b) laying out standard, often used equipment.

PEOPLE

1) Type A - Physician's Assistant or Associate - Level 4C

Treating

Acts on or interacts with individuals or small groups of people who need help (as in sickness) to carry out specialized therapeutic or adjustment procedures. Systematically observes results of treatment within the framework of total personal behavior because unique individual reactions to prescriptions (chemical, physician's, behavioral) may not fall within the range of prediction. Motivates, supports, and instructs individuals to accept or cooperate with therapeutic adjustment procedures, when necessary.

a. The physician's assistant participates in the therapy plan, prescribes treatment for minor conditions (uncomplicated upper respiratory infection-without fever) as defined by the physician in accordance with standing orders set forth by the physician (including first aid).

b. Emergency Care - In the absence of the physician in accordance with orders, provides first aid for acute emergency procedures and triage for seriously ill or injured patients.

2) Type B - Special Technical Physician's Assistant or Technician - Level 4B

Instructing

Teaches subject matter to others, or trains others, through explanation, demonstration, practice, and test (e.g., instructing a group of patients on a specific subject, procedures; instructing other personnel in the physician's office (or hospital) in use of specialized equipment).

3) Type C - Office Assistant or Aide, etc. - Level 2

Exchanging Information

Talks to, converses with, and/or signals people to convey or obtain information, or to clarify and work out details of an assignment, within the framework of well-established procedures. (This takes into account normal verbal interchange between the physician's assistant and people, as defined above.)

THINGS

1) Type A - Physician's Assistant or Associate - Level 3a

Laying out specialized instruments and equipment

Arranges, lays out emergency room supplies, surgical equipment and instruments for operating room, delivery room supplies, equipment instruments, checks sterility markers, intravenous solutions, tractions, etc. Performs suturing in emergency situations when physician is not available.

2) Type B - Special Technical Physician's Assistant or Technician - Level 2b

Operating and controlling special diagnostic equipment

Starts, stops, controls, and adjusts equipment designed for visualizing or testing body functions, i.e., E.K.G., x-rays of chest and extremities, gastric intubation, intravenous equipment, catheters, etc. (depends upon type of specialty training, i.e., E.E.G.). Checks equipment for accurate performance, restores proper functions by replacement of basic parts which may be faulty parts, adjusts attachments according to requirements.

3) Type C - Office Assistant or Aide, etc. - Level 1a

Routine office equipment

Utilizes routine office equipment, i.e., pencils, pens, record forms, all desk top tangibles. Also, basic instruments such as thermometer, weighing scales, simple equipment for screening vision and hearing, stethoscope, sphygmomanometer.

GENERAL EDUCATIONAL DEVELOPMENT

Reasoning

1) Type A -- Physician's Assistant or Associate - Level 5

   - Have the working knowledge of the basic and clinical sciences.

   - Define problems, collect data, establish facts, draw valid conclusions (e.g., performing and reporting on the most involved aspects of the physical examination and social history).

   - Interpret an extensive variety of technical medical materials and techniques in books, manuals, texts, etc.

   - Deal with the abstract variables necessary to perform the highest level tasks of the physician's assistant role.

2) Type B - Special Technical Physician's Assistant or Technician - Level 4

   - Have knowledge of the medical care system procedures utilized by employing physician.

   - Apply principles and techniques to meet minor every day or emergency needs of patients which require variation from the standard norms and procedures.

3) Type C - Office Assistant or Aide, etc. - Level 2

   - Have the common sense/understanding to carry out detailed but uninvolved written or oral instructions (e.g. obtaining initial patient complaints).

   - Deal with problems involving few concrete variables from standardized situations (e.g. rearranging patient appointments within acceptable variations).

MATHEMATICS

1) Type A - Physician's Assistant or Associate - Level 5

   Have knowledge of mathematical and statistical techniques sufficient to understand measures of central tendencies and probability determinations, as used in the medical literature.

2) Type B - Special Technical Physician's Assistant or Technician - Level 4

   Perform ordinary arithmetic, algebraic, and geometric procedures in standard practical applications (i.e., birth and death rates, disease incidence rates, etc.).

3) Type C - Office Assistant or Aide, etc., Level 2

   Use arithmetic to add, subtract, multiply, and divide whole numbers.

LANGUAGE

1) Type A - Physician's Assistant or Associate - Level 5

   - * Language ability to give oral or written instructions, procedures to other workers.
   - * Explain technical matters in terms which disadvantaged patients, families can understand.
   - * Report on and write articles related to clinical studies.
   - * Prepare and deliver lectures on medical subjects related to one's field of work.
   - * Ability to explain and instruct physician's other employees to carry out routine procedures.

2) Type B - Special Technical Physician's Assistant or Technician - Level 4

   - * Language ability to understand all case record sheets, fill out fairly complex insurance forms.
   - * Understand medical procedure manuals and instructions.
   - * Ability to understand, converse with others about medical textbooks and current medical journals.

3) Type C - Office Assistant or Aide, etc. - Level 3

   - * Ability to communicate with patients, describing their case/situation in terms which they can understand.
   - * Converse with physicians on fairly detailed and technical matters.

DEFINITION

The staff has developed several definitions of the physician's assistant being trained here; however, all the definitions were so similar to that which was proposed by the American Association of Medical Colleges' Task Force on Physician's Assistant Programs that we have decided to accept the definition proposed for the TYPE A Assistant which is quoted below: (See Appendix III)

> "Type A within this definition of an assistant to the physician is capable of approaching the patient, collecting historical and physical data, organizing the data, and presenting it in such a way that the physician can visualize the medical problem and determine the next appropriate diagnostic or therapeutic step. He is also capable of assisting the physician by performing diagnostic and therapeutic procedures and coordinating the role of other more technical assistants. It is recognized that he functions under the general supervision and responsibility of the physician, though he might, under special circumstances and under defined rules, operate away from the immediate surveillance of the physician. To properly perform at this level, the assistant must possess enough knowledge of medicine to permit a degree of interpretation of findings and a degree of independent action within these defined rules and circumstances."

JOB DESCRIPTION (summary of tasks)

Receives assigned patients, interviews them for social, family and medical history, noting down patient's chief complaint, description of condition, symptoms, summarizing and reporting salient data, following physician's format. Carries out such administrative details as preparing insurance forms, scheduling patient laboratory tests (obtaining and reporting results). Explains and interprets physician's instructions to patient and/or family. Conducts visit, and visits physician's patients in hospital, checking on their condition (questioning and conducting parts of the physical examination as needed) and reporting on their condition (changes) to the physician (memo or phone call).

Conducts full range of physical examination, eliciting and maintaining patient's cooperation throughout (coaching/diverting). Observes and reports on patient's appearance, general condition. Observes and examines patient's body systems, using range of techniques and equipment as required, detecting, describing and reporting on any abnormalities/pathologies. (The analysis is based on the knowledge and application of criteria for detecting normal/ abnormal conditions in each system or part of the system, e.g., metabolic, cardio-respiratory, etc.). The physician's assistant analyzes conditions by applying criteria.

The physician's assistant may follow a checklist or other guide in reporting the results of the physical examination to the physician. Performs (or schedules) laboratory tests, procedures on blood, urine, etc., summarizing and reporting results to the physician. He treats patients, administering medication, and helps them in carrying out steps of treatment plan under the direction of a physician.

He administers first aid to patients, ranging from treating lacerations which may require simple suturing to prevention of serious bleeding (using tourniquets, tying bleeders, if necessary). Performs triage and critical tasks such as cardio-respiratory resuscitation needed to restore, maintain normal conditions. In emergency situations, when physician is not present, performs life saving tasks exercising own discretion, until physician can be contacted.

Instructs physician's other employees on how to take basic patient measurement (temperature, blood pressure, etc.), use of basic laboratory equipment (E.K.G.) and office procedures (scheduling appointments).

Illustrative Examples of Work

1) Takes patient history and enters the data on patient's chart.

2) Performs physical examinations on the patient and records all the normal and abnormal data for review by the physician.

3) Accurately provides the necessary routine laboratory studies such as hemoglobin, hematocrit, white blood count, urinalysis, etc.

4) Administers patient therapeutic procedures such as oxygen therapy, drug administration, dressing changes, cast repairs, etc.

5) Writes and/or dictates all progress notes and discharge summaries for review by the supervising physician.

6) Oversees and coordinates the patient's entire evaluation and therapeutic program.

7) Performs any other tasks within capabilities as designated by the supervising physician.

General Knowledges, Skills and Abilities

1) Ability to competently perform and properly record an accurate and detailed general patient history and physical examination.

2) Ability to skillfully and properly perform routine patient diagnostic and therapeutic procedures.

3) Ability to properly and accurately express ideas both orally and in writing, and to establish and maintain an effective rapport with patient and other health team members.

4) Ability to competently and reliably perform the specialized tasks and functions commonly utilized in the medical and surgical specialty of the student's choice.

5) The graduate will have an understanding of medical terminology, human function, and disease processes.

A more detailed list of functions which a physician's assistant could be trained to perform and which was determined by the time and motion studies is listed below.

Functions

1) Detailed patient history, including family-social, past medical, present illness, and interval events.

    a. coordination and assessment of historical data and information noting and describing abnormal findings.

    b. progress notes on hospital, home, and office patients.

    c. hospital discharge summaries for physician's review and signature.

Functions (cont'd)

2) Complete systematic physical examination

   a. ability to properly use routine examining equipment and procedures

      (1) stethoscope
      (2) sphygmomanometer
      (3) percussion hammer
      (4) tuning fork
      (5) otoscope and ophthalmoscope
      (6) hearing and vision testing equipment

   b. coordination and assessment of the physical examination findings noting and describing abnormal findings

   c. routine health examinations for employment, school, insurance, etc., and completion of reports

3) Perform and/or schedule routine test procedures

   a. routine blood examination, counts, differential counts, hemoglobin and ability to recognize and describe abnormal cell histology

   b. routine urines

   c. tests for occult blood in feces

   d. skin tests

4) Perform and/or schedule special diagnostic tests and procedures as directed by the physician

   a. perform E.K.G. and be able to determine deviations from normal tracings (care and adjustment of instrument)

   b. take and develop x-ray films of chest and extremities

   c. naso-gastric intubation and gastric analysis

   d. spinal fluid cell counts

   e. schedule special procedures, i.e., organ scans, G.I. series, etc.

Functions (cont'd)

5) Assist the physician with therapy

   a. immunizations
   b. first aid and triage
   c. suturing minor lacerations
   d. splint and cast application and removal (family practice and surgery)
   e. intravenous and subcutaneous medication
   f. inhalation therapy (equipment)
   g. physical therapy (equipment)
   h. catheterization
   i. dressings
   j. assist in surgery (surgery and family practice and obstetrics)
   k. assist in deliveries (family practice and obstetrics)
   l. interpret doctor's instructions and orders to patient and others

6) Miscellaneous

   a. interpretation and checking automated patient data, i.e., auto analyzer, patient self history schedules, multi-phasic screening, etc.
   b. handle telephone for information and minor conditions
   c. do assigned administrative duties, i.e., completion of insurance claims, Medicaid, Medicare forms, etc.
   d. assist with community health service commitments (school health, community clinics, etc.)
   e. home visits and followup

APPENDIX I

NORTH CAROLINA PHYSICIANS' INTEREST IN PHYSICIAN'S ASSISTANTS

August, 1970

During the summer of 1970 the following questionnaire was mailed to all North Carolina physicians.

		Yes	No
1.	Do you feel there is a need for this type personnel?	☐	☐
2.	Do you think you would be interested at some time in employing a physician's assistant?	☐	☐
3.	If your answer to #2 is "yes," would you want a physician's assistant within the next two years?	☐	☐
	-or sometime later than two years?	☐	☐

4. Check your specialty practice:

Family Physician _____
Pediatrics _____
Surgery _____
Medicine _____
Obstetrics & Gynecology _____
Other, specify______________

5. Location of practice ______________________________

6. Signature (optional) ______________________________

The total questionnaires mailed was 3825 of which 25 were returned (deceased, retired, or no longer residents of the state). Thus, out of 3800 questionnaires, 2025 were answered (53.3%).

Eighty-two percent indicated that there was a need for physician's assistants. Forty-two percent indicated they would employ a trained physician's assistant, of which forty-six percent would employ within two years, forty-four percent would employ later than two years, and the remainder were undecided or did not specify."

The following specialties indicated the greatest interest: pediatric responses indicate that 55% (80) were interested in employing a physician's assistant; surgery and surgical subspecialties, 45% (216); family practice, 44% (238); obstetrics and gynecology, 42% (82).

While this survey indicates a high percentage of interest, it is difficult to make any reliable predictions for the future since many physicians do not really understand how a physician's assistant functions in a practice situation. The only conclusion that can be drawn is that there is a considerable interest among North Carolina physicians in the Physician's Assistant Training Program.

Lee Powers, M.D.
Director, Division of Allied
Health Programs

NORTH CAROLINA SURVEY OF PHYSICIANS' INTEREST IN PHYSICIAN'S ASSISTANTS

	"Needed"				"Would Employ"				Would Employ Within 2 Years			Would Employ Later than 2 Years		
Specialty	Yes	Undecided	No	N.R.	Yes	Undecided	No	N.R.	Yes	Undecided	N.R.	Yes	Undecided	N.R.
Surgery * (total - 484)	396	19	65	4	216	28	237	3	88	16	4	106	2	-
Medicine ** (total - 382)	316	11	49	6	153	22	203	4	67	7	4	73	2	-
Pathology (total - 37)	30	1	5	1	12	2	22	1	7	-	1	4	-	-
Public Health (total - 48)	45	-	3	-	17	1	27	3	5	4	1	7	-	-
Anesthesiology (total - 17)	11	2	4	-	3	-	14	-	-	-	-	3	-	-
Radiology (total - 79)	62	2	15	-	30	2	47	-	11	4	2	13	-	- (1-2)
Psychiatry (total - 92)	83	1	6	2	30	2	60	-	22	4	-	4	-	-
Pediatrics (total - 145)	123	4	18	-	80	7	58	-	33	6	3	38	-	-
Obs-Gyn (total - 196)	158	7	30	1	82	8	106	-	30	7	2	43	-	-
Family Prac. (total - 537)	426	19	87	5	238	27	268	4	132	6	4	93	2	1
Not Specified (total - 8)	1	-	7	-	1	-	7	-	1	-	-	-	-	-
TOTALS	1651	66	289	29	862	99	1049	15	396	54	21	384	6	1
	2025				2025				471			391		

*Includes Surgery Sub-specialties

**Includes Medicine Sub-specialties

SURGICAL ASSISTANT
NORTH CAROLINA SURGEONS' WILLINGNESS TO DELEGATE SPECIFIC ACTIVITIES
(N = 115)

A. HOSPITAL ROUNDS	YES		NO		N.R.	
	#	%	#	%	#	%
1. Oversee initial physical evaluation and coordinate diagnostic procedures.	68	59.1	39	33.9	8	7.0
2. Arrange and schedule appropriate consultations.	81	70.4	30	26.1	4	3.5
3. Write orders for physician's signature and discuss special orders with nursing personnel.	79	68.7	31	27.0	5	4.3
4. Daily rounds; review charts and record patient progress on hospital records.	91	79.1	14	12.2	10	8.7
5. Consult with patient and/or family regarding disease, limitations and special precautions.	46	40.0	58	50.4	11	9.6
6. Instruct patient in wound care, colostomy, etc.	104	90.4	6	5.2	5	4.3
7. Schedule operations and return visits. Describe procedure to be done. Information re patient's hospital location or address for call.	85	73.9	22	19.1	8	7.0
8. Patient diagnostic and technical procedures:						
a. insert intravenous catheters	96	83.5	14	12.2	5	4.3
b. infuse intravenous medications and evaluate fluid therapy	85	73.9	23	20.0	7	6.1
c. venous cutdown, where indicated	63	54.8	43	37.4	9	7.8
d. change dressings; wound debridement, remove suture and drain	96	83.5	15	13.0	4	3.5
e. emergency patient procedures (same as C-4)	94	81.7	8	7.0	13	11.3
f. catheterize patients of same sex	109	94.8	4	3.5	2	1.7
g. nasogastric intubation, gastric analysis	109	94.8	4	3.5	2	1.7
h. paracentesis	21	18.3	82	71.3	12	10.4
i. thoracentesis	24	20.9	78	67.3	13	11.3
j. lumbar puncture procedures and studies	21	18.3	83	72.2	11	9.6

(1-3)

B. OPERATING ROOM

	YES		NO		N.R.	
	#	%	#	%	#	%
1. Arrange with operating room for special instruments.	107	93.0	4	3.5	4	3.5
2. Review patient chart; assure correct patient and obtain necessary X-ray films, etc.	105	91.3	8	7.0	2	1.7
3. Notify surgeon when patient has arrived and will be ready for surgery.	109	94.8	3	2.6	3	2.6
4. Position, prep and drape the patient.	103	89.6	7	6.1	5	4.3
5. During operation, handle and expedite communication, requests for frozen sections, blood, etc.	107	93.0	4	3.5	4	3.5
6. After operation -- dress wound.	105	91.3	8	7.0	2	1.7
7. Accompany patient to recovery room or intensive care unit and assure immediate post-operative care.	102	88.7	9	7.8	4	3.5
8. Assist surgeon with operation when requested to do so.	111	96.5	2	1.7	2	1.7
OFFICE						
1. Initial history and physical examination -- new patients.	54	47.0	52	45.2	9	7.8
2. Interval note on return patients.	82	71.3	26	22.6	7	6.1
3. Triage officer for patients waiting to be seen (assist nurse in determining order in which patients should be seen).	99	86.1	13	11.3	3	2.6
4. Emergency first aid until physician arrives, i.e., pulmonary resuscitation, external cardiac massage, control hemorrhage, etc	111	96.5	1	0.9	3	2.6
5. Plan and schedule diagnostic tests and consultations.	66	57.4	38	33.0	11	9.6
6. Preliminary discussion with patient regarding disease, limitations, special precautions and wound care.	47	40.9	59	51.3	9	7.8
7. Prep and drape patients and assist with minor procedures.	112	97.4	1	0.9	2	1.7
8. Remove dressings, sutures and casts.	110	95.6	1	0.9	4	3.5
9. Apply casts and dressings.	93	80.9	10	8.7	12	10.4

(1-4)

D. EMERGENCY ROOM

	YES		NO		N.R.	
	#	%	#	%	#	%
1. Emergency first aid.	108	93.9	1	0.9	6	5.2
2. Suture laceration.	69	60.0	34	29.6	12	10.4
3. Respiratory resuscitation.	107	93.0	4	3.5	4	3.5
4. External cardiac massage.	107	93.0	4	3.5	4	3.5
5. Stand by with defibrillator for physician orders.	108	93.9	2	1.7	5	4.3
6. Gastric lavage or induced emesis.	105	91.3	6	5.2	4	3.5

(1-5)

PERCENTAGE DISTRIBUTION OF NORTH CAROLINA OB-GYN SPECIALISTS' WILLINGNESS TO DELEGATE SPECIFIC ACTIVITIES TO A TRAINED OB-GYN ASSISTANT

OBSTETRICS	Assistant Sex not Mentioned* N = 21	Male Assistant N = 87**	Female Assistant N = 87**
History	85.7%	54.1%	90.8%
Examination (including Pap smear)	19.0	12.7	28.8
Routine prenatal visits	90.5	54.1	90.8
Follow patients in labor	85.7	35.7	88.5
Postpartum follow-up:			
Early puerperium	85.7	33.4	71.3
In hospital	90.5	33.4	72.5
In home	85.7	26.5	71.3
Postpartum follow-up exam in office	23.8	11.4	27.5
GYNECOLOGY			
History:			
New patient	71.4	40.3	64.4
Old patient	71.4	42.5	72.4
Examination including:			
Breasts	14.3	8.0	23.0
Pelvis	9.5	6.8	17.3
Pap smear	38.1	12.7	39.1
Hospital:			
O.R. Assistance	81.0	77.0	92.0
Postoperative rounds	81.0	51.7	71.3
Home follow-up	81.0	43.7	79.3

*Winston-Salem, North Carolina only

** State of North Carolina
exclusive of Winston-Salem

APPENDIX II

(Draft for Planning Purposes)

Protocol for
Evaluation of Bowman Gray Physician's
Assistant Program

I. Selection of Candidates

II. Training Program

   A. Curriculum, grades and instructor evaluation
   B. Time-motion studies of various types practices
   C. Functional job analysis and preparation of task list for the Physician's Assistant

III. Analysis of the Physician's Assistant in practice

   A. Task Performance

   Intended to match role with training program, physician's need and to assess degree of uniqueness of role. Instruments are being designed to collect before and after data on:

   1. Tasks performed: by whom, relative frequency and degree of independence.
   2. Type of patients seen
   3. Location of service
   4. Relation of selection procedure, school to effectiveness.

   B. Effect on physician's role

   Intended to measure any changes that may occur by introduction of Physician's Assistant. Variables to be measured before and after are:

   1. Physician's time distribution by type of activity
   2. Total number of hours in patient care per week
   3. Location of care
   4. Productivity (number of patients per week)
   5. Efficiency (number of patients per hour)

   C. Effect on practice

   To assess effectiveness of the Physician's Assistant in terms of economic impact and availability of medical service

   Variables:

1. Demographic data on practice (number per year, type of patients, waiting time vs. service time, office facilities, auxiliaries, hospital privileges)

2. Income before and after (either in figures or per cent change)

3. Costs--current operating, overhead, uncollected bills; those attributable to Physician's Assistant.

4. Costs per unit of service

D. Acceptability

To assess viability of a new health career and relate personal characteristics to success or failure. This phase of the protocol will be developed last, since this will be evaluated at the end of a year's employment. However, certain data will need to be gathered before employment such as the expectations of the Physician's Assistant, M.D., and auxiliaries. During employment, the variables to be measured are yet to be selected but possibilities are as follows:

1. Consumer acceptance

    a. number uncollected bills
    b. rates of loss or gain of patients in the practice
    c. number broken appointments
    d. questionnaire to sample group
    e. characteristics appreciated (most/least)

2. M.D. acceptance

    a. number of tasks delegated
    b. length of employment and salary
    c. expectations vs. present status
    d. characteristics most/least appreciated

3. Physician's Assistant satisfaction

    a. concordance of expectations with experience
    b. length of employment
    c. future plans
    d. job satisfaction--by use of S.R.A. Inventory in Nurse Index

4. Co-worker acceptance
   Rating as to value in practice

Numbers do not justify deeper exploration at this time, but future evaluation might get into the area of professionalization, interaction and other personnel.

APPENDIX III

REPORT OF AAMC TASK FORCE ON PHYSICIAN'S ASSISTANT PROGRAMS
February 5, 1970

PREAMBLE:

The Task Force was formed by action of the Council of Academic Societies at its November 2, 1969 meeting. It was formed in response to the many questions, both expressed and anticipated, raised by the rapid growth of physician's assistant programs and in recognition of the opportunity for the Council to exert leadership in this new area of medical education. Because of the possible implications for the Council of Deans and the Council of Teaching Hospitals, a representative of each was appointed to the Task Force.

The Task Force was asked to consider the role of these assistants and the need for standards for programs producing them, and to make appropriate recommendations to the Council by February 5, 1970.

The Task Force met on two occasions, January 9, 1970, and January 27, 1970, and the following report is a result of these deliberations. Representatives of the American Medical Association were invited to meet with the Task Force, and Mr. Ralph Kuhli and Dr. T. F. Zimmerman were present at and participated in its meetings. Dr. Cheves Smythe of the AAMC and Dr. John Fauser of the AMA also participated in the first meeting.

The group is aware of the great variety of questions raised by this new type of health manpower, many of which were not considered a part of the charge of this particular Task Force and are therefore not addressed in this report. Among the questions are:

(a) The legal aspects of registration and/or control of individual assistants.

(b) The relationship between these categories of assistants and the established, previously defined, health professions (nursing, physical therapy, laboratory technology, etc.).

(c) The relationship between these individuals and physicians and/or medical institutions, such as hospitals, including methods of financial support after the training period and the manner of billing patients for their services.

(d) The need for additional numbers within each of the previously defined, established manpower categories and for still other, yet unspecified, assistants within the broad limits of health care.

I. THE NEED:

A. New types of assistants to the physician are necessary components of the health care team. The current output of medical schools, plus the output of new and expanded schools, will be insufficient to meet the health care needs of those segments of society now being served, while extending equivalent services to those segments now receiving little or no care.

B. Even if sufficient expansion of physician output could be achieved to meet the total need for services, there is doubt that this would be a wise course, since certain tasks do not require the unique talents of the physician and may be more appropriately performed by those with less total training.

C. The existing manpower categories (such as professional nurses and physical therapists) could assume many of these functions with added training but should not be considered as the sole or the primary entry pathway into these new health professions. There are already shortages in nearly all of the existing health manpower categories, and insistence that new functions be assumed by members of these categories would severely limit the availability of new manpower for these purposes. A new primary pathway into the new category of physician's assistant would tend to open the range of health careers and would enhance the potential for recruitment of male candidates.

II. THE RESPONSIBILITY OF AAMC:

A. While it is still possible for assistants to the physician to be trained by an educational institution, such as a junior college, and a group of practicing physicians, it is less likely that an adequate combination of facilities, medical faculty and interest will be found outside the teaching hospitals and medical teaching institutions represented by the AAMC.

B. As a part of its overall concern for the training of the physician, the AAMC should have an interest in any technique or system which will make his work more efficient or more effective. The utilization of well trained assistants is one such technique.

C. As a part of its concern for the provision of high quality health care to all persons, the AAMC must become concerned with the proper training, proper function, and proper utilization of such personnel.

D. As a part of its concern for medical students, the AAMC must promote the concept of an effective health care team as a means of extending the scope of services offered to patients by providing exposure to effective use of assistants at the medical school level.

III. RECOMMENDED ACTION:

A. The AAMC should demonstrate leadership in the definition of the role and function of these new categories of health care personnel, in setting educational standards for programs producing them, and in considering the additional problems raised in the preamble.

B. The AAMC should seek the counsel and the cooperation of other interested organizations and agencies as it moves ahead in the above task.

C. The AAMC should work toward an accrediting agency as a means of effective accreditation and periodic review of programs producing such personnel. A joint liaison committee with the AMA, similar to the Joint Liaison Committee for Medical Education, is one suggested mechanism.

IV. GUIDELINES FOR DEFINITION OF FUNCTIONAL LEVELS OF ASSISTANTS:

A. In view of the great variety of functions which might be assumed by assistants, the variety of circumstances in which these functions might be carried out, and the variety of skills and knowledge necessary to perform these functions, it is necessary to define several categories of assistants. These are defined primarily by their ability for making independent judgmental decisions. This, in turn, rests on breadth of medical knowledge and experience.

1. Type A within this definition of an assistant to the physician is capable of approaching the patient, collecting historical and physical data, organizing the data, and presenting it in such a way that the physician can visualize the medical problem and determine the next appropriate diagnostic or therapeutic step. He is also capable of assisting the physician by performing diagnostic and therapeutic procedures and coordinating the role of other more technical assistants. It is recognized that he functions under the general supervision and responsibility of the physician, though he might, under special circumstances and under defined rules, operate away from the immediate surveillance of the physician. To properly perform at this level, the assistant must possess enough knowledge of medicine to permit a degree of interpretatio of findings and a degree of independent action within these defined rules and circumstances.

2. Type B is characterized by a more limited area of knowledge and skill, and a more limited ability for integration and interpretation of findings. He is, as a result, less capable of independent action, but within his area of skill and knowledge he may be equal in ability to the Type A assistant or to the physician himself. Assistants at this level may be trained in a particular specialty without prior exposure to more general areas of medical practice, or may be trained in highly technical skills.

3. Type C is characterized by training which enables him to perform a single defined task or series of such tasks for the physician. These tasks generally require no judgmental decisions and are under direct supervision.

B. All such assistants should function under the general supervision and authority of a physician or a group of physicians and should not establish an independent practice. In addition, the functions performed by such assistants should be within the competence and capability of the responsible physician or physicians. For example, it would be inappropriate for a surgeon's assistant to perform a pre-operative cardiac evaluation, unless the surgeon is competent to review his work critically and assume responsibility for its accuracy and completeness.

V. GUIDELINES FOR EDUCATIONAL PROGRAMS FOR TYPE A ASSISTANTS:

This document concerns itself solely with the guidelines for training of Type A assistants. This does not preclude the need for guidelines for other types as described above.

A. General Objectives:

To provide educational guidelines insuring high standards of quality for programs training Type A assistants as specified in Paragraph IV-A-1 above, while preserving sufficient flexibility to permit innovation, both in content and method of education, all in the interest of protecting the public, the trainees, and those employing graduate assistants; to establish standards for use by various governmental agencies, professional societies, and other organizations having working relationships with such assistants.

B. General Prerequisites:

1. An approved program must be sponsored by a college or university with arrangements appropriate for the clinical training of its students. This will usually be a hospital maintaining a teaching program. There must be evidence that this program has education as its primary orientation and objective.

2. An approved program must provide to the accrediting agency, to be available in turn to other educational institutions, prospective students, physicians, hospitals, and others, information concerning the program including the following:

   Name and location of school
   College/university affiliation
   Clinical/hospital affiliation
   Director
   Student capacity
   Academic calendar
   Tuition and fees

3. An approved program must also provide, for the use of the accrediting agency, sufficient confidential information to establish that the program is in compliance with the specific guidelines which follow.

C. Administration:

1. An approved program may be administered by a medical school, hospital, university, college or other entity, providing it can assure that the educational standards can be maintained and other requirements met.

2. The administration shall be responsible for maintaining adequate facilities and a competent faculty and staff.

3. The administration shall assure the continued operation and adequate financing of the program through regular budgets, which shall be available for review by the accrediting agency. The budget may be derived from gifts, endowments, or other sources in addition to student fees.

4. The administration shall assure that the standards and qualifications for entrance into the program are recorded and available to the accrediting agency, and that these standards are met. Records of entrance qualifications and evaluations for each student shall be recorded and maintained, including transcripts of high school and college credits.

5. The administration shall make available to the accrediting agency yearly summaries of case loads and other educational activities done by clinical affiliates, including volume of outpatient visits, number of inpatients, and the operating budget.

D. Organization of Program:

1. The program must be under supervision of a qualified director, who has at his disposal the resources of competent personnel adequately trained in the administration and operation of educational programs.

2. It will be the responsibility of the director to maintain a qualified teaching faculty.

3. The director will maintain a satisfactory record system to document all work done by the student. Evaluation and testing techniques and standards shall be stated, and the results available for inspection.

4. The director will maintain records on each student's attendance and performance.

5. The director will maintain on file a complete and detailed curriculum outline, a synopsis of which will be submitted to the accrediting agency. This should include both classroom and clinical instruction.

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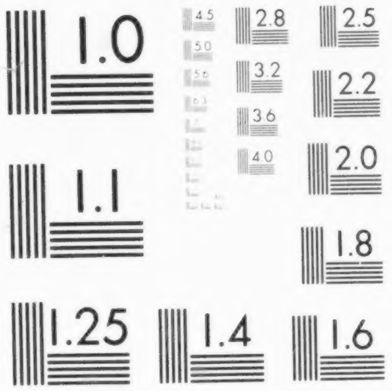
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E. Physical Facilities:

1. Adequate space, light, and modern equipment should be provided for all necessary teaching functions.

2. A library, containing up-to-date textbooks, scientific periodicals, and reference material pertaining to clinical medicine, its underlying scientific disciplines, and its specialties, shall be readily accessible to students and faculty.

3. A hospital or other clinical facility shall be provided and of sufficient size to insure clinical teaching opportunities adequate to meet curriculum requirements.

F. Faculty:

1. An approved program must have a faculty competent to teach the didactic and clinical material which comprises the curriculum.

2. The faculty should include at least one instructor who is a graduate of medicine, licensed to practice in the location of the school, and whose training and experience enable him to properly supervise progress and teaching in clinical subjects. He shall be in attendance for sufficient time to insure proper exposure of the student to clinical teaching and practice.

3. The program may utilize instructors other than physicians, but sufficient exposure to clinical medicine must be provided to insure understanding of the patient, his problem, and the diagnostic and therapeutic responses to this problem. For this reason attention is specifically directed to provision of adequate exposure of students to physician instructors.

G. Prerequisites for Admission:

1. For proper performance of those functions outlined for Type A assistants as described in Paragraph IV-A-1 above, the student must possess an ability to use written and spoken language in effective communication with patients, physicians and others. He must also possess quantitative skills to insure proper calculation and interpretation of tests. He must also possess behavioral characteristics of honesty, dependability, and must meet high ethical and moral standards in order to safeguard the interest of patients and others. An approved program will insure that candidates accepted for training are able to meet such standards by means of specified evaluative techniques, which are available for review by the accrediting agency. The above requirements may be met in several ways. The following specific examples could serve the purpose of establishing the necessary qualifications and are provided as guides.

    a. Degree-Granting Programs: The successful completion of the pre-professional courses required by the college or university as a part of its baccalaureate degree.

    b. Non-Degree (Certificate) Programs: A high school diploma or its equivalent, plus previous health related work, preferably including education and experience in direct patient care, plus letters of recommendation from physicians or others competent to evaluate the qualifications cited above.

2. All transcripts, test scores, opinions, or evaluations utilized in selection of trainees should be on file and available to the accrediting agency on request.

H. Curriculum:

1. The curriculum should provide adequate instruction in the basic sciences underlying medical practice to provide the trainee with an understanding of the nature of disease processes and symptoms, abnormal physical findings, abnormal laboratory tests, drug actions, etc. This shall be combined with instruction, observation and participation in history taking, physical examination, therapeutic procedures, etc. This should be in sufficient depth to enable the graduate to integrate and organize historical and physical findings as described in Paragraph IV-A-1.

2. The didactic instruction should follow a planned and progressive outline and include an appropriate mixture of classroom lectures, textbook assignments, discussions, demonstrations and similar activities. There should be sufficient evaluative procedures to assure adequate evidence of student competence.

3. Instruction should include practical instruction and clinical experience under qualified supervision sufficient to provide understanding of and skill in performing those clinical functions required of this type of assistant. Evaluation techniques should be described and results recorded for each student.

4. Though the student may concentrate his effort and his interest in a particular specialty of medicine, he should possess a broad general understanding of medical practice and therapeutic techniques, so as to permit him to function with the degree of judgment previously defined.

5. Though some variation is possible for the individual student, dependent on aptitude, previous education, and experience, the curriculum will usually require two or more academic years for completion.

6. It is urged that the college or university sponsoring the program establish course numbers and course descriptions for all training, and that a transcript be established for each student. Students should receive college credit when this is appropriate, and should receive a suitable degree if sufficient credit is earned. If a degree is not earned, a certificate or similar credential shall be granted to the student on completion of the course of study.

I. Health:

1. Applicants will be required to meet the health standards of the sponsoring institution.
2. As evidence of its concern for imparting the importance of proper health maintenance, the program should provide for the students the same health safeguards provided for employees of affiliated clinical institutions.

J. Accreditation Procedures:

1. Applications for approval of a program for the training of Type A assistants as described above shall be made to the accrediting agency.
2. Forms and instructions will be supplied on request and should be completed by the director of the program requesting approval.
3. Approval of a program may be withdrawn when, in the opinion of the accrediting agency, the program fails to maintain the educational standards described above. When a program has not been in operation for a period of two consecutive years, approval will automatically be withdrawn.
4. Approved programs should notify the accrediting agency in writing of any major changes in the curriculum or a change in the directorship of the program.

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